TOWARDS A NATIONAL SYSTEM OF EDUCATION

D P NAYAR

The book deals with educational developments in India during 1937-51. During this period perhaps more fundamental thinking was done and bolder experiments conducted than at any time in the history of Indian education.

The first Chapter gives the socio-economic and political background of the period which was perhaps the most turbulent in modern Indian history. Against this backdrop, the second chapter gives a bird's eye-view of the educational scenario, summing up in a broad sweep the main educational events of the period as a result of the momentum of the continuing programmes and the efforts of the interacting official and non-official agencies, to devise a national system of education to meet the challenge of Independence.

The highlights of the period are presented within the broad contours as delineated in Part-I. Part II deals with the most momentous events of the period: the presentation and working out of the Gandhian model, the and the development development of a national system of technical education to meet the challenge of India's industrial development, and critically evaluates the impact of the Radhakrishnan Report on University Education.

The various threads of development were pulled together and presented in the First Five Year Plan, coming as the climax to the period. A national system of education, suited to the needs of Independent India, had emerged and a plan was conceived and drawn up for implementation.

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TOWARDS A NATIONAL SYSTEM OF EDUCATION

"I recognise no God except the God that is to be found in the hearts of the dumb millions. . . . And I worship the God that is Truth. . . through the service of these millions".

—*Mahatma Gandhi*

"Generations to come, it may be, will scarce believe that such a one as this ever in flesh and blood walked upon this earth."

—*Albert Einstein*

Towards A National System of Education

(*Educational Development in India—1937-51*)

D P NAYAR

Foreword

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To
Dr. (Ms) P. NAYAR
my most revered sister
who has lived only for others

FOREWORD

Mahatma Gandhi had presided over the National Education Conference in October 1937 at Wardha. He regarded the idea of Basic Education as his "last and the best gift to the nation". Writing in the Navajivan, Gandhiji had stated "I have given many things to India. But this system of education together with its techniques is, I feel, the best of them." Bapu attached the highest value to imparting of all-round education to children through creative and productive activities which promoted in them the sense of discipline, self-reliance, dignity of labour and equality of all human beings.

After Independence, the Education Commission commended this system for adoption not only at the Primary and Secondary levels but also in Universities.

Dr D P Nayar has studied the education system as a key instrument for national reconstruction and has examined aspects of the Nai Taleem, Adult Education, Post Basic Education and University Education.

This book reflects his deep insight and knowledge about education systems, and understanding of Gandhiji's ideas in the context of India's requirements, and is a valuable contribution to the literature on this subject.

S D SHARMA

Vice President
India
New Delhi
June 13, 1989

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New Delhi
1989.

D P Nayar

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INTRODUCTION

BRIEF DESCRIPTION AND SCOPE

With the assumption of power in 7 out of the 11 provinces by the Congress in 1937 under the 1935 Act, introducing provincial autonomy, the national leaders saw independence round the corner and started grappling with the problems of national reconstruction. Education being the most important instrument of national reconstruction, the designing of a national system of education received most serious attention. In this task both the official and non-official agencies took initiatives and interacted with each other.

The period 1937-51, preceding the starting of planned development, is memorable in the history of educational development in India for the following reasons:

1. Gandhiji put forward his ideas of a national system of education on basic lines, which he called Nayee Taleem (New Education). It was India's—and perhaps the world's—first and most comprehensive concept of developmental education—of education linked to development—nay, of devising education as the main instrument of development, a development which was not in the interest of the few but in that of the people at large, especially of the weakest among them. As Gandhiji put it, his system of education had been "conceived as the spearhead of a silent social revolution fraught with the most far-reaching consequences".

His ideas have a tremendous significance not only for India but for the entire developing world. The University Education Commission stated: "at this fateful moment in our history we have the extreme good fortune to have had presented to us a pattern and philosophy of education of such universal and fundamental worth that it may well serve as the type for bringing into being the new India which is the dream of many of us". Gandhiji not only spelt out his ideas but also demonstrated in a few places how they were to be implemented. As the University Education Commission testified, the ideas were given "inspiring expression" in some places. It is true that through half realisation of concepts, faulty planning and still more faulty implementation, we did not make a success of his ideas. But, as our late President, Dr. Zakir Hussain said, future generations would discover the truth of basic education and implement it in the spirit in which it was conceived. In education, as in so many other things, Gandhiji belongs not only to the past but also, and even more, to the future. His relevance is bound to grow with time. It is, therefore, the task and duty of the present generation of historians to identify and preserve as much of the evidence of his work as still exists in a connected and meaningful form.

The objectives of the study in this regard were:

(*a*) to collect scattered evidence—both of theoretical exposition and the experiments conducted—and put Gandhiji's concept of education in its proper perspective and clear it of the controversies based on half truths which still surrounded it. It was also intended to identify the problems that arose in implementation and the solutions that were discovered or were well-nigh in sight;

(*b*) to study the changes in governmental policy in regard to basic education from one of hostility—especially after 1942—to its incorporation in *Post-War Educational Development in India*—popularly known as the

Sargeant Report—even though the British bureaucracy was not reconciled to the idea of Indian independence till the very end; and

(*c*) to study the role of the political leadership and the bureaucracy in the implementation of basic education. The questions that arose in this connection were:

   (*i*) To what extent did they or their officers understand the concept fully and tried to implement it honestly?
   (*ii*) To what extent was it the usual political obeisance to the politically inportant leaders followed by the equally hypocritical attitude of their bureaucratic lieutenants?
   (*iii*) To what extent were the programmes supported by adequate research and experimentation which alone could ensure the success of a nationwide innovative programme?
   (*iv*) To what extent was a dialogue developed with the people to create an understanding of the meaning and importance of the innovative programme so necessary for the success of an innovation?

Though the questions under (c) emerged sharply only after the period under review, they had already started showing themselves up even before Gandhiji's death.

2. The first integrated picture of a national system of education was presented by the Central Advisory Board of Education (CABE) in the Sargeant Report in 1944 and was accepted by the Government.

The significance and impact of the report and its main recommendations in the historical perspective were to be examined.

3. The country plans for vocational, scientific and technical education. The Abbot-Wood Report, dealing with the lower levels of vocational and technical skills, was published in 1937. The National Planning Committee made its own recommendations in regard to technical as on general education. The Sarkar Committee (1946) recommended the setting up of our

top-most technical institutions, the IITs—one in each region. The one in Kharagpur was established in 1951. The Scientific Manpower Committee set up in 1946 made a comprehensive assessment of the requirements of scientific and technical manpower of the post-war reconstruction programme of industrial development.

With the setting up of the All India Council of Technical Education in 1945, an institution had been created for evolving a national policy of technical education. It started a benchmark survey of the state of technical institutions in the country as a pre-requisite to their development on sound lines. (The survey was completed in 1953-54). The principals of technical institutions also organised themselves in the Association of Principals of Technical Institutions. The stage was set for the rapid development of technical education as the necessary support to industrial development of independent India.

The tasks that the Study took up in this field to be accomplished were:

(*a*) to trace the evolution of British policy from the stage of the halting and grudging recognition of the need for India's industrialisation and training of technical manpower therefor; and

(*b*) to determine precisely the importance of this period in the growth of technical education and evaluate the recommendations of the various committees in the light of later developments.

4. The University Education Commission was set up in 1948. It submitted its report in 1949. It is an important landmark in the development of university education and the Study sought to evaluate its importance in the perspective of history.

Another important question that was studied was the reason why university education was taken up first while secondary education was allowed to remain "the weakest link of the chain". Apart from the Sargeant Report recommending the bifurcation of secondary education into the academic and the vocational streams not much thought had been given to the problems of this important stage of education by the

Government. Gandhiji was, of course, working out the pattern of secondary education through his post-basic schools. The possible reasons for this topsy-turvy approach to the educational pyramid were analysed.

While the study concentrated on the above main questions, it also analysed the various other phenomena noticed during the period—the slowing down of elementary and secondary education, the rapid expansion of university education etc.—to present a complete and integrated picture of educational development during the period under review.

The Study deals with a period of intensive preparation for evolving a national system of education. Momentous developments took place in different fields of education. An attempt has been made to study these in an integrated fashion in the context of the overall socio-economic and political situation then prevailing and the challenges of Independence then perceived.

REVIEW OF EXISTING LITERATURE

A number of people have covered the period 1937-51 in their histories of education. The account of this period in these studies, however, is generally superficial and very brief. Education is moreover studied rather as an isolated phenomenon than in its relation with the total socio-economic environment. For example, Nurullah and Nasik in their history of education—which is probably the best book on the subject—have given only about 7 pages to basic education of which 2 pages are devoted to Gandhiji's exposition of the scheme, 3 pages to the summing up of the Zakir Hussain Committee Report and 2 pages to developments during 1937-47. There is, again, no mention of pre-basic, bost-basic and adult education of Gandhiji's conception. There is hardly any serious attempt to bring out the socio-economic challenges which led Gandhiji to formulate his scheme of basic education. Similarly in regard to technical and university education. The treatment is very brief and does not touch on the problems that have been examined in the present Study. This is perhaps inevitable because of the long time span taken up in these books and the fact that they are intended generally for students rather than scholars.

DESIGN OF THE STUDY

The study begins with an analysis of the social, economic and political background. These events had their impact on the various problems of the formal system of education. Far more important was the educational effect of these events and movements on mass consciousness. The Chapter is entitled, "The Backdrop".

The next chapter is entitled, "The Educational Scenario: A Bird's Eye-view" which spells out the impact of events described in Chapter I on the formal education system. The picture, however, is still painted with a broad brush to fix the contours of the educational scenario against which the highlights of the period are presented in Part II.

Part II begins with an account of the Gandhian Model, the presentation of which—in theory and practice—was the most important event in the history of educational development in India so far. Chapter III sums up and evaluates his philosophy of life, from which his philosophy of education and methodology are derived. These are indicated in Chapters III and IV. In Chapters V-X his educational philosophy and methodology are spelt out in the context of the problems of each stage of education—adult, pre-basic, basic, post-basic and university.

The second highlight of the period is the growth of technical and vocational education to meet the challenges of unemployment and industrialisation.

Chapter XII deals with the last important event of the period: the submission of the Report of the University Education Commission. It is an analytic chapter, trying to evaluate the significance of this major event.

Chapter XIII (Part III) sums up the developments of the period and their significance.

METHODOLOGY

The methodology used was one of library research. Secondly, the approach was integrative and everywhere the attempt was to see facts not in isolation but in relationship with other facts. Thirdly, the emphasis was more on the interpretation of facts than on the discovery of new facts.

MOST SIGNIFICANT FINDINGS AND SCOPE FOR FURTHER RESEARCH

Looking at the educational developments during 1937-51, the following new ideas/experiments stand identified as the most significant:

(1) The Gandhian model. The present Study looks at only the beginning of Gandhiji's great educational experiment. It would be useful to examine its further development in the years that followed to study the forces that led to its ultimate failure and see how the great idea could be resuscitated. It will require both theoretical and action research.

(2) The idea of new engineering schools centred round specific industries needs to be perfected for implementation through action research and first-hand study of American models.

(3) The idea of Rural Universities requires considerable theoretical as well as action research covering subsequent developments like the Rural Institutes.

These ideas have great potential for enabling us to meet some of the most serious challenges of our social, economic and political situation. They need to be worked out more fully and put on a sound footing through arduous experimentation and research.

Trying to identify the agencies that could most appropriately take up these research projects, 1 & 3 could fall within the sphere of the ICHR to the extent of developments during 1951-66. 1966, when the Education Commission reported, marks an important milestone in educational development. The period belongs sufficiently to the past to claim the attention of the ICHR. By that time the new developments had run their course and were on the way out. They had also revealed their inherent strength and weakness as well as the defects of the planning and implementing machinery.

As far as the action research part in regard to 1-3 is concerned the ICHR could pass it on to other appropriate bodies of the Ministry of Education for consideration and necessary action.

A comprehensive bibliography is given at the end to assist further research work.

Finally, the views expressed in this study are mine and the ICHR, who have financed it, are in no way responsible for them.

New Delhi. D. P. NAYAR

PART I

Overview

ONE

THE BACKDROP

I

A MOST TURBULENT PERIOD

1937-51 was the most turbulent period of modern Indian history after 1857. As a matter of fact turbulence and struggle were the basic unifying feature of this period, packed with events—constitutional struggle, social upheavals, economic tangles, mass civil disobedience and leonine violence, freedom and its bitter aftermath, and finally, preparations to limp back to normalcy through planned development by carefully husbanding the nation's scattered and depleted resources after the storm. Unlike 1857, however, it was not an elitist struggle but a mass upsurge. A whole subcontinent was afire with the irresistible will to be free. By and large, it was the poor, 'ignorant' and illiterate masses who stood up and won against the mighty British Empire on which the sun never set. That was possible because a new weapon was discovered in India's ancient armoury and perfected for application in the new situation on a scale unknown in history – an event of global significance in a world tottering on the brink of complete self-annihilation. Nuclear weapons represent violence perfected, which could only be countered by non-violence at white heat. It is not to suggest that everybody who participated in the struggle was non-violent or even fully understood it. But, as

Gandhiji said, just as in violent warfare, the strategy was known and understood only by the General, so in non-violent warfare it was enough if the General was fully non-violent and the army had full faith in him and carried out his behest. And, therefore, whenever he saw that discipline was breaking down he called off the struggle and started re-building the non-violent strength of the masses through constructive work. Nor is it to suggest that everybody agreed with him. In a country of India's size and diversity there would always be whirlpools and cross-currents, deviations and even opposition. As a matter of fact, the most gigantic battles that Gandhiji had to fight were against the internal enemy—the violence of his opponents and the weakness of his adherents. And it was here that non-violence shone at its brightest. It was not only Gandhiji's but India's finest hour, when she could proudly show the heights to which man could rise to balance her shame at the depths to which she saw man could sink.

II

AFTERMATH OF THE 1935 ACT

The period began with elections under the 1935 Act, which had been criticised by almost everyone. Originally the idea was to fight the elections on a radical, leftist programme but not to accept office, and fight for a Constituent Assembly elected on universal suffrage. But once the elections had been won, the pressure for office acceptance became irresistible. Those who were traditionally for entering the legislatures and fighting India's battle constitutionally joined hands with constructive workers, and, supported by business interests, accepted office. So the Rightists had won and all brave talk of the predominant left at the Lucknow and Faizpur sessions of the Congress in 1936 ended in smoke. Birla had been right in confiding to Thakurdas (20 April, 1936): "Jawaharlalji seems to be like a typical English democrat . . . out for giving expression to his ideology, but he realises that action is impossible and so does not press for it." Gandhiji had resigned from the Congress in 1934 though he continued to guide it from outside and was concentrating on constructive work to build the non-violent strength of the masses.

The 1935 Act was a sop to Indian nationalism to blunt its militancy. As Linlithgow confided to Zetland, the Act had been framed as the best way to maintain British influence in India. "It is no part of our policy", he said, "I take it, . . . gratituously to hurry the handing over the controls to Indian hands at any pace faster than that which we regard as best calculated, on a long view, to hold India to the Empire". Deprived of the punch of Civil Disobedience, recalled under the Gandhi-Irwin Pact, Indian national opinion was treated with scant regard and the 1935 Act marked little advance over 1919, except in the provinces where provincial autonomy—theoretically in all departments—replaced dyarchy and the electorate was increased from 6½ lakhs to 30 million.[1] The Federal part was highly objectionable but it did not come into effect as none of the parties concerned—the British Government, the Princes, the Muslim League, the Congress etc.—was keen on its implementation, though each for different reasons.

The Congress success in the elections was spectacular. It was ultimately able to form governments in U.P., Bihar, Orissa, C.P., Bombay, Madras, NWFP and Assam—in 8 out of the 11 provinces. The people voted for self-sacrifice and socio-economic change towards justice and fair play. The effect of this national triumph on the people was intoxicating. The Congress membership shot up. Leftist movements among students, peasants and labour developed a new fervour. The State People's movement against feudalism and autocracy, which till lately had been elitist and rather tame, experienced an upsurge. The sobering influence of responsibility was evident against communal riots and left excesses and the AICC in its September, 1938 resolution gave full support to Congress governments in their measures for the maintenance of law and order and the protection of life and property. The relations of the popular ministers with the bureaucracy were generally smooth which could be explained primarily by the British Government's serious intention to keep the Congress entangled in administrative work and away from agitation. Secondly, it could also be the underlying sympathy of the Indian bureaucracy with the nationalist aspirations. Thirdly, it could be due to the tradition of discipline and obedience in the bureaucracy itself.

The Congress Ministries were faced with a four-fold challenge. Firstly, from the British Government with its tight financial control and surreptitious undermining of the national movement by encouragement of the communalists, the Princes, and others. Secondly, from the Muslim League. Thirdly, from its own heterogeneous character and the attempt to reconcile opposing vested interests: Capitalists and labour, Zamindars and peasantry, the Princes and their subjects. Fourthly, from the people's expectations.

Provincial autonomy worked under very tight financial constraints. Sardar Patel hinted in July 1939 that unless the provinces received a large share of the income tax, the Congress governments might be forced to resign.[2] Gandhiji said: "The cruellest irony of the New Reforms lies in the fact that we are left with nothing but the liquor revenue to fall back upon in order to give our children education". And this when the people's expectations had been aroused by their own nationalist leaders coming to power for the first time.

Even more dangerous than the tight financial control exercised by the Centre was the British game of playing one community against the other. The Muslim League which was badly trounced in the elections became a real power through British encouragement, Congress miscalculations, Hindu communalism and Jinnah's political acumen. The Congress concessions to the Muslims and the untouchables alienated the caste Hindus and strengthened Hindu communalism.

Again, while it was a great advantage and triumph of the Congress to have forged a broad-based national and anti-imperialist front, it had its disadvantages which came to the fore when the implementation of the promises made started and the Congresss tried to reconcile the interests of capitalists and labour, those of zamindars and peasants, of caste Hindus and untouchables. While on the whole the capitalists favoured the Congress and exerted their pressure to bring it to accept office—as they would lobby for them and fight for their interests *vis-a-vis* foreign interests—they were very sensitive about any tilt to the left shown by the Congress. It is interesting to note that some industrialists were so frightened by the radical rhetoric of the Congress that J.P. Srivastava, a U.P. industrialist, told Wavell that after assumption of office by the Congress in U.P. in 1937, "the leading industrialists—all I think Hindu—got together and decided to finance Jinnah and the Muslim League and also the Mahasabha, as the extreme communal parties to oppose Congress who they feared might threaten their financial profits—a truly illuminating admission".[3] They were sore with the Congress when they were compelled by financial stringency to levy urban property tax and sales tax on cloth. On the other hand, the Congress anxiety not to hurt the Sikh and Hindu traders in the NWFP prevented Dr. Khan Saheb from undertaking radical measures in the interest of the predominantly Muslim peasantry. This was one of the reasons why the Khan Saheb Ministry lost its popularity. Not inclined to open another front with the Princes, the Congress kept off the States People's movements as far as possible. For example, at the Haripura session (February 1938) while the ultimate goal of Puran Swaraj was declared to cover the States as well, the resolution insisted that "for the present", the Congress could extend to the State People's movements only "moral support and sympathy". Similarly, in spite of its natural sympathies with the left, the Congress never openly supported Trade Union and Kisan Sabha militancy. In such a situation, by trying to satisfy everybody, the Congress could satisfy no one. Nehru privately expressed his dissatisfaction with the Congress Ministries, calling them "counter-revolutionary", "merely carrying on the tradition (with minor variations) of the previous governments".[4]

III

DECLARATION OF WAR

The Congress Ministries were rescued from this unenviable position by Britain's unilateral association of India with the declaration of war on Germany on 3 September 1939, which led the Congress Ministries to resign on 29-30 October 1939, when Britain refused to demonstrate any serious intention to apply the declared aims of the Allies—democracy and national right to self-determination—to India and instead prepared for crushing the national movement. By an amendment to the 1935 Act, they had, even before the declaration of war, assumed emergency powers in regard to subjects transferred to the popular ministers. As a major part of their strategy to keep India weak and divided, the extreme demands of the Muslim League were encouraged.

Still, because of the sympathy of the Congress for the Allied cause in a world perspective and Gandhiji's non-violence, which prevented him from taking advantage of the enemy's difficulties, the Congress tried its level best to give time and opportunity to the British to demonstrate their sincerity about their war aims, which was necessary for mobilising Indian opinion for full cooperation in the war effort. But when all hope was shattered, Gandhiji launched his individual Satyagraha, which would not seriously embarrass the war effort, register the nation's protest, and at the same time build the nation's will to resist and test its discipline and non-violent strength. The economic benefits of the war, without its dangers, led to a certain prosperity in the form of quick profits and employment, while the impact of rise in prices on labour was countered through subsidies. This might have also made some contribution to the delay in launching a mass movement.

In the latter half of 1941, while the attack on Russia sharpened India's sympathies with the Allied cause, the Japanese drive towards South-East Asia—with Singapore falling on 15 February, Rangoon on 8 March, the Andamans on 23 March—brought the war to India's door-steps. British policy, however, remained as obdurate, repressive and unimaginative as ever and, even when they acted under pressure of world opinion, all that they aimed at was to seem to act without doing anything. The Churchillian torpedoing of the first Cripps Mission drove India to the wall. Many factors had been contributing to taking the situation to the boiling point. The Indian losses in Malaysia and Singapore, following the British defeat there, turned hostile business into supporters of the war effort. The C. P. Governor wrote to Linlithgow: "The capitalist elements in the Congress Working Committee would go to any length to safeguard themselves and their property from the ill effects of a possible Japanese invasion".[5] Prices shot up, especially of foodgrains, due to shortages resulting from the cutting off of rice imports from Burma, the coming in of a large number of soldiers from abroad, and profiteering and black-marketing. The misbehaviour of foreign soldiers, especially of increasing number of rape cases, added fuel to the fire. The scorched earth policy followed by a tottering empire before the Japanese advance was seen by many as the last kick in India's belly. The seizure and destruction of all country boats in Bengal were monstrous. As Gandhiji said, in the Harijan of 3 May 1942, "To deprive people in East Bengal of boats is like cutting off vital limbs". Apart from the loss of national property, what weighed with Gandhiji, even more strongly, was that if the nation did not act now they would lose the will to resist Japanese invasion, when it came. And Gandhiji did not agree with many others who believed that the Japanese would come to liberate them. He said: "In fact, I believe that Subhas Bose (who would come with Japanese help) will have to be resisted by us".[6] No invader comes to liberate a subject people. They only can liberate themselves. So Gandhiji was convinced that the time to "do or die" had come and he gave the call to the nation in his famous "Quit India" resolution passed by the Bombay session of the Congress on August 8, 1942. The mass struggle thus launched was to be on the widest possible scale on non-violent lines. If, however, the leaders were arrested then people should not feel helpless. Every man then should become his own guide.

IV

QUIT INDIA

That situation soon arrived. With the arrest of the leaders, the people as a whole rose as one man to uproot British imperialism, by whatever means they could command. The storm had burst. Its spontaneity and elemental fury showed that Gandhiji had rightly judged the mood of the people that they were ready for his "do or die" mission. In the absence of any guidance of central leadership, the movement took different forms in different places, and in different groups. Beginning in the urban areas, it started with massive strikes, hartals, demonstrations and clashes with the police and the army. The bureaucracy which had been preparing for confrontation with national forces came down upon the people with a heavy hand and suppressed these assertions of the national will with the utmost brutality. From the cities students fanned out into the countryside, destroying communications and organising a peasant rebellion. At many places local National Governments were formed. But this programme was also quickly suppressed. This was followed by terrorist activities, which occasionally took the form of guerilla warfare. Peasants worked during the day but at night they engaged in sabotage activities. Feats of rare heroism were not rare. The total impact, however, of these terrorist activities on the Government and its war effort was not serious. But the overall effect of the movement frightened the British. In a telegram to Churchill on 30 August, Linlithgow described the movement as "by far the most serious rebellion since that of 1857, the gravity and extent of which we have so far concealed from the world for reasons of military security".[7] The severity with which it was suppressed has been described by Niblett, the District Magistrate of Azamgarh (U.P.), who was removed for not being tough enough. He speaks of white terror. The police "set fire to villages for miles". Collective fines were levied. It appeared as if the police were on a *shikar* or "on an errand of destruction". There were public floggings, insertion of ruler inside the rectum etc. Linlithgow had ordered "machine-gunning from air" to destroy crowds disrupting communications. Aeroplanes were used around Patna, Bhagalpur and Monghyr in Bihar, Nadia and Tamluk in Bengal and Talcher in Orissa. The suppression by brutality was reminiscent of 1857 but whereas then both the opponents were armed, here the British bayonets and machine gun fire were ranged against largely unarmed crowds.

V

TOWARDS A NEGOTIATED SETTLEMENT

By the end of 1942, the ruthless use of force, which wartime conditions enabled the British to pursue without provoking a world-wide note of disapproval and a note of protest from their own people, was able to suppress the rebellion. But it was also obvious that the British could not risk such a confrontation again in the context of world opinion, popular attitudes of the British people themselves and even of their own army. So Wavell, who became Viceroy in 1943, counselled Churchill to start negotiations before the end of the war, when demobilisation and consequent unemployment would create "a fertile field for agitation, unless we have previously diverted their (Congress) energies into some more profitable channel, i.e., into dealing with the administrative problems of India and in trying to solve the constitutional problem".[8] Churchill, however, was a no-changer and it was left to the Labour Government to take advantage of his Commander-Viceroy's insight and advice.

Continued incarceration enabled the Congress Right to regain some of its pristine image, to some extent marred by the rather conservative performance of the Congress Ministries in 1937-39, and brought the Socialists and the Rightists together as partners in a common national endeavour. On the other hand, the 'treachery' of the Communists during the 1942 national struggle drove a wedge between them and the other leftist parties. All this strengthened the forces of moderation favouring a negotiated settlement. The exhaustion of the popular forces under the brutal suppression also did not favour another struggle. Perhaps the most powerful support for a negotiated settlement came from the business community.

The war conditions enabled the business community to make fantastic profits through profiteering in food, share-market operations, and the black market in general. There was also some industrial growth due to import substitution and regional self-sufficiency enforced by the war. The new economic and political situation enabled them to enter into foreign collaboration to overcome technological backwardness. In basic industries and creation of infrastructural facilities, where profits in the initial stages are low, they favoured public investment. Sumit Sarkar rightly comments: "As a class which had never had it so good amidst unprecedented mass misery, the bourgoisie was naturally averse to any further round of popular struggle which could have unmanageably radical consequences, and its formidable influence was cast firmly on the side of a negotiated compromise settlement after 1945".[9]

The contrary force favouring anti-imperial militancy was the formation of the Azad Hind Government and the Indian National Army by Subhas Chandra Bose in Japan on 21 October 1943. Although it had little military significance its psychological impact was considerable. The trial of the INA officers provoked large scale public demonstrations all over the country. "Even more significant", says Sarkar, "was the probable link between the INA experience and the wave of disaffection in the British Indian army during the winter of 1945-46, which culminated in the great Bombay naval strike of February, 1946 and was quite possibly the single most decisive reason behind the British decision to make a quick withdrawal".[10]

Two developments since 1942 were, however, to weaken the nationalist front. First was the rise to power of the Muslim League. To take full advantage of Congress suppression, it willingly played into British hands to undermine national unity. It had gained power in Assam and Sind in 1942, and Bengal and NWFP in 1943, and was battering at the gates of the Punjab coalition by 1945. Jinnah was well on the way to establishing himself as the sole spokesman of the Muslims and claiming equality with Gandhiji as the spokesman of the "Hindu" Congress. The Pakistan slogan was becoming increasingly popular among the Muslim masses. Partition was being presented not only as a political goal but also as an economic boon. It would save the Muslims from the Hindu Zamindar and the Bania. It would save the Muslim small entrepreneurs from the competition of big Hindu commercial houses. So would the professional classes have more jobs free from stiff competition of the Hindus.

Support to the League strangely came from the Communists, who took full advantage of the lifting of the ban on them after their support of the war. Their membership increased. Their dedicated workers and organisational capability enabled them to rapidly increase their strength and, by the end of the war, the communists were the third strongest party in the country after the Congress and the League. In their attempts to win

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popularity with the League, when cold shouldered by the Congress, they came very near supporting Pakistan.

Gandhiji was released on 6 May 1944 on account of illness and thus began the last phase of the drama ending in India's Independence on 15 August 1947. The main characters were the British Government, the Congress, the League and the Communists. The British were not prepared to face another 1942 struggle, which they were afraid the Congress was still capable of launching, because of the post-war international situation, the situation at home and the conditions in India. The triumph of Russia, the setting up of Communist governments in Eastern Europe, the progress of the Chinese revolution, the resistance of Vietnam and Indonesia to the restoration of colonial rule etc., created an international environment in which repression on the 1942 model would be internationally damaging. Stationing of large number of men for long in India would not be welcome to a war-weary and economically exhausted Britain. Nor would the progressive trend of thought released by the war welcome the Hitlerite treatment of Indians. In India there was lot of unrest due to post-war unemployment, high prices, profiteering and black marketing etc. Due to a variety of reasons there was a major food crisis, when ration was reduced to 1200 calories per head, when even in war-time London in 1943 it was over 2800 calories. There were riots, where people attacked ration centres. In the terrible summer and autumn of 1943, lakhs trekked to Calcutta to starve to death on its streets, "begging no longer for rice but for the water in which it had been cooked". "Between one and a half to three million perished in Bengal in a basically man-made famine".[11] The INA trials (1945-46) and their impact on the Indian Army's psyche, climaxing in the RIN Mutiny (18-23 February, 1946), and the presence of a large number of demobilised soldiers made the situation much more dangerous than in 1942. Among the people the general mood was one of defiance. In November 1945, for example, when demonstrators asking for release of INA prisoners were fired upon in Calcutta they "largely stood their ground or at most only receded a little, to return again to the attack". On 29 March, 1946 Wavell noted in his Journal (p. 232) on the necessity to avoid the mass movement or revolution "which it is in the power of

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the Congress to start, and which we are not certain we can control".

But the Government was also not prepared to grant independence to India, and in this regard there was not much difference between the labourites and the Conservatives. Labour leaders, as Wavell noted in his Journal (p. 399) on 24 December 1946, were "in reality imperialists" and "like everyone else (hated) the idea of our (their) leaving India but like everyone else . . . (had) no alternative to suggest". So the only thing they could do was to delay the process and make it as difficult and ruinous to India's future as possible. They gave the League practically a veto on constitutional reform and helped to revive it from its rather weak position in early 1945, when its Ministries in NWFP and Bengal fell and were extremely vulnerable in Assam and Sind. Nor had it demonstrated yet any capacity for mass action. The League was encouraged to continue to make impossible demands. The second element in the strategy was to take full advantage of the Congress reluctance (not lack of capacity) to launch another mass struggle for fear of playing into the hands of the Communists, whose cult of violence made Gandhiji wary of them and whose anti-capitalist philosophy frightened the business community and their supporters in the Congress. Negotiations, so long as they were available, were also more attractive to the Congress as providing an easy access to power. Consequently, the Government played upon this fear and bullied the Congress without reaching the breaking point. For example, in August 1946 when Gandhiji reacted strongly to Wavell's threat of not summoning the Constituent Assembly if the Congress did not accept compulsory grouping, Wavell records in his Journal (p. 343), the Secretary of State in a "panic-stricken telegram" emphasised the necessity of avoiding a break.

The Communists who had become a real power by fomenting and joining any trouble—economic (largely on the labour and the peasant fronts) or political—were feared by both the Congress and the British Government, though each for its own reasons. Why the Congress abhorred them has been stated above. The Government were afraid of them because of the atmosphere they created, the reprisals they invited, and the mass alienation and hostility against the Government that resulted therefrom. There was a strike-wave in 1946 which set its own record. They led the Bengal peasant agitation for *tebhaga* (two-thirds of the crop to the share-cropper instead of the half or even less given so far) in 1946-47, the Punnapra-Vayalar rising in the Travancore State in 1946-47 and Telengana struggle (1946-51), which Sumit Sarkar has rightly called "The biggest peasant guerilla war so far of modern Indian history, affecting at its height about 3000 villages spread over 16000 square miles and with a population of three million.[12] These movements were scattered and sporadic and were not coordinated and exploited by an astute political leadership. But their potential danger was obvious. From the British point of view their specially dangerous feature was that they brought Hindus and Muslims together, thus proving correct Aruna Asaf Ali's prophecy that it would be easier to unite the Hindus and Muslims" at the barricade than on the constitutional front"—of which the British were very much afraid. Wrote Wavell in his Journal (p. 485) on 30 May 1946: "We must at all costs avoid becoming embroiled with both Hindus and Muslims at once".

In this context the British had no option but to inch forward to constitutional government—the Simla Conference (24 June-14 July 1945), elections announced (21 August 1945), Cabinet Mission (24 March-June 1946), swearing in of Interim Government (2 September 1946) etc. But the denouement of the mischief sown in the encouragement of the League overtook events and led to the communal holocaust which shrieked through the length and breadth of India. The Frankenstein had come of age. the Muslim League called on the "Muslim Nation" to launch "Direct Action" from 16 August to achieve Pakistan. "Direct Action" launched by this "cold logician" meant murder, rape, looting of property and thereby enforcing exchange of populations and making Pakistan possible. Calcutta, Bombay, Noakhali, Bihar, Garhmukteshwar (U.P.), NWFP went up in flames in quick succession, followed by Punjab, which was the worst scene of carnage. It is estimated that 1,80,000 were killed. By March 1948 nearly 11 million Muslims, Sikhs and Hindus had become refugees leaving behind 11 million acres of land. After this blood bath, Partition was not only accepted but pressed for as the only solution under the circumstances. By 10 March 1947, Nehru was telling Wavell in private that though "the Cabinet Mission Plan was the best solution if it could be carried through—the only real alternative was the partition of the Punjab and Bengal".[13] The unthinkable had become "the only feasible solution". Pakistan became a reality on 15 August 1947 and a truncated bleeding India became free. The head was cut off to get rid of the headache.

VI

FREEDOM AND THE AFTERMATH

The question that arises is: was Partition inevitable? It is true that the communal riots had seriously undermined the main strength of the Congress, the secular ideal, even in the case of some of its sturdiest stalwarts. Secondly, Wavell was determined to put a premium on Jinnah's intransigence. The bringing in of the League in the Interim Government (26 October 1946) brought the functioning of the Government to a halt. Wavell seemed to gloat over this and seemed to compliment Liaqat Ali Khan for his clever budget, imposing heavy duties on big business (mostly Hindus), which would drive a wedge between the Congress and its supporters, the business community. The surprising thing is that the League was brought in without calling off its Direct Action—so murderers were put at the head of the Government—without accepting the long-term plan of the Cobinet Mission etc. This determined support to the League at any price also demoralised the Congress. Thirdly, the fear of general disorder being spearheaded by the Communists was perhaps what frightened them most.

But all these factors had been, in smaller or greater degree, present throughout the freedom struggle. What had happened in the meantime that the Congress could be treated so cavalierly by the British, and they could not take a firm stand an any vital issue like the unconditional bringing in of the League, Constituent Assembly on universal suffrage, plebiscite in the NWFP etc. ? The British seemed to know the Congress strength better than the Congress itself and were afraid of it. But they also knew that the Congress would not fight and so could afford to go quite far in bullying it without reaching the breaking point. What had really so atrophied the Congress will to fight? Gandhiji gives the answer. The fear of chaos had seized Congress leadership and it was that which was driving them to agree to Partition. This was inevitable: "Since they had stepped into office they had cut themselves off from the non-violent power of the masses".[14] The fact of the matter is that the Congress had no faith in non-violence. Earlier they had adopted it as a strategy and listened to Gandhiji. For there was no other way. Today they saw an alternative—the easy way to power. And the Congress High Command were not prepared to launch once more upon "perilous seas" of mass action. So they bypassed Gandhiji and did not even consult him when accepting Partition and advised him to retire to the Himalayas. The poignancy of this phase is well brought out in the following extract from Pyarelal's book:

"On the following morning, the 1st June (1947), mistaking the hands of his watch, he woke up earlier than usual. As there was still half an hour before prayer, he remained lying in bed and began to muse in a low voice:

> 'The purity of my striving will be put to the test only now. Today I find myself all alone. Even the Sardar and Jawaharlal think that my reading of the situation is wrong and peace is sure to return if Partition is agreed upon. . . . They did not like my telling the Viceroy that even if there was to be partition, it should not be through British intervention or under the British rule. . . . They wonder if I have not deteriorated with age. . . . Nevertheless I must speak as I feel, if I am to prove a true and loyal friend to the Congress and the British people, as I claim to be . . . regardless of whether my advice is appreciated or not. I see clearly that we are setting about this business the wrong way. We may not feel the full effect immediately, but I can see that the future of independence gained at this price is going to be dark. I pray that God may not keep me alive to witness it. In order that he may give me the strength and wisdom to remain firm in the midst of universal opposition and to utter the full truth, I need all the strength that . . . purity can give'.[15]

"He continued: 'But in spite of being all alone in my thoughts, I am experiencing an ineffable inner joy and freshness of mind. I feel as if God Himself is lighting my way before me. And that is perhaps the reason why I am able to fight on single-handed. People ask me to retire to Kashi or to the Himalayas. I laugh and tell them that the Himalayas of my penance are where there is misery to be alleviated, oppression to be relieved. There can be no rest for me as long as there is a single person in India lacking the necessities of life. . . I cannot bear to see Badshah Khan's grief. . . . His inner agony wrings my heart. But, if I give way to tears, it would be cowardly and, the stalwart Pathan as he is, he would break down. So I, go about my business unmoved. That is no small thing'.

" 'But may be', he added after a pause, 'and I alone am floundering in darkness'. The oppression of the impending division of India seemed to be weighing on him.

"With a final effort, he concluded: 'I shall perhaps not be alive to witness it, but should the evil I apprehend overtake India and her independence be imperilled, let posterity know what agony this old soul went through when thinking of it. Let it not be said that Gandhi was party to India's vivisection. But everybody is today impatient for independence. Therefore there is no other help'. Using a well-known Gujarati metaphor, he likened independence-cum-partition to a 'wooden loaf'. 'If they (the Congress leaders) eat it, they die of colic; if they leave it, they starve'."[16]

Gandhiji's position may be summed up as follows. The British Government must "tell the turbulent elements in the country firmly and boldly that there can be no departure from the document of 16th May, until the people stop the sanguinary strife".[17] The British duty was to withdraw on or before the promised date "in an orderly manner if possible", leaving us to "chaos if unavoidable.[18] Only British withdrawal could introduce realistic thinking into the situation. "We are unable to think coherently, while the British are still there in India".[19] After the British had gone enlightened self-interest would dawn upon the Congress and the League and we could sit down like a family and argue for Pakistan; and if it was reasonable it would be conceded. But nothing should be yielded to force.

Otherwise the lesson that India would leave to the world would be "that everything was to be got if mad violence was perpetrated in sufficient measures"[20]—"an additional abject lesson in violence with which it was sick almost unto death".[21] Gandhiji was of the view that if "the Congress did not weaken, the Muslim League will (would) have to come to the Congress and talk reason instead of presenting its mounting demand at the point of the pistol as it had hitherto been doing".

What was worrying Gandhiji was that the way freedom had come its advent might only prove to be the prelude to losing it. Whereas his Congress colleagues felt that fratricide would cease with the conceding of Pakistan, Gandhiji felt it would increase. Appetite grows by what it feeds on. When we yield to violence, violence only increases. Increased violence in Pakistan and its persistent refusal to own up its mistakes would leave the Indian Union, who did not believe in non-violence and would keep an army, with no option but to go to war. War between the two countries—especially in the nascent stage, and plagued by the prevailing law and order situation and with doubtful loyalty of large sections of the people—would be suicidal for both the countries and would open up the possibility of third country intervention, which might be the end of Indian independence. A further complicating factor would be the large number of Princes. The inevitable arms race would be suicidal for the two countries with vast masses in grinding poverty, the amelioration of which would require all the resources these countries might be able to muster. Even the solution of mass evacuation of Muslims, if enforced, would only lead to war. For Pakistan had refused to take Muslims from India except those from East Punjab.

The events that followed proved how right was his foresight and intuition. In the last week of April, Mountbatten, while returning from the Frontier saw near Rawalpindi the devastation of Hindu-Sikh quarters, which his Press Attache described as "As thorough as any produced by fire-bomb raids in the war.[22] This was followed by retaliation in Amritsar followed by the killings in Lahore, setting up a chain reaction of murder, rape, arson and loot till the whole of the Punjab was boiling over. The police and the military, having been divided between India and Pakistan on communal basis generally sided with the rioters. The senior leaders, even where they did not want these wanton killings, could take no strong action for fear of losing] popularity. The end result has been described by Pyarelal as follows:

> "In the tornado of primitive passions that had broken loose individual wills seemed to count for nothing. Millions had been uprooted and thrown into an atomic turmoil, like forest leaves caught in a tropical hurricane."

"The biggest migration of population in recorded history was in progress. Almost ten million people were on the move in both directions across the border in the Punjab. The Government had not anticipated an outbreak of such dimensions. The civil authority in both the Punjabs was paralysed."[23] And again:

> "In the second half of September, huge foot convoys of non-Muslims, each 30,000 to 40,000 strong started from the fertile canal colonies of West Punjab upon a 150 miles trek. From 18th September to 20th October, twenty-four of these, altogether 849,000 strong, flanked by their cattle and bullock-carts crossed over to India. An astonishing phenomenon was the movement of some 200,000 refugees, mostly Sikhs from Lyallpur in a column 57 miles long. On the way, fleeing refugees whether they travelled by road or by rail or on foot, were attacked by people from the surrounding villages. Outbreak of cholera and other epidemics and later floods added to their misery. Many thousands thus perished on the way."[24]

The problems of keeping these millions in refugee camps, leave alone their ultimate rehabilitation, were "of baffling magnitude and complexity".

In reaction to the Punjab killings Calcutta—which had been in a state of very uneasy peace since the Great Calcutta Killing of August 16, 1947, and where the situation had been normalised only by Gandhiji's miracle—suddenly blew up with all possibility of provoking reprisals in Noakhali. Gandhiji had to stake his life to prevent the vicious circle from widening.

The influx of refugees from Pakistan set ablaze Delhi—where "at one stage every fourth person was a refugee". The very heart of the Union was thus poisoned. Mountbatten said: "If we go down in Delhi we are finished". Gandhiji again had to stake his life to snatch Delhi from the jaws of death.

Another very dangerous element of the situation was the presence of a large population of Muslims. Most of them had Muslim League sympathies. The birth and stabilisation of the new loyalty to the Indian Union in the light of the new circumstantial necessity would take time. In the meantime in the case of a war with Pakistan this vastly spread out fifth column could prove extremely dangerous. And yet to look upon every Muslim with suspicion would not only hold up the normalisation process but was also likely to alienate the nationalist Muslims, apart from being unfair to them.

The danger potential of the Princes was also very great. While by the time Independence came most of the States had already acceded to the Indian Union—thanks to the genius of Sardar Patel—Kashmir, Junagarh and Hyderabad still remained outside. To force Kashmir's accession Pakistan under the garb of tribals attacked Jammu in September. There was a full-scale invasion of the Kashmir valley on October 25, by tribals assisted by Pakistani army personnel, who reached within 35 miles of Srinagar, throwing the State forces in complete disarray. When thus driven to the wall, the Maharaja acceded to the Indian Union on October 26 and the Indian Union moved its forces into Kashmir. Jinnah was ready at Abbotabad to make a triumphal entry into the Kashmir capital on Id Day and on being thus baulked in his design, ordered Pakistani forces to move into Kashmir. He withdrew this order only when he was advised by his British Officers that India had perfect right to send its troops to Kashmir at the request of the Maharaja after India had accepted the joint request of the Maharaja and the people's organisation, the National Conference. And his move would lead to war between the two Dominions which would lead to a withdrawal of all British officers, which Jinnah was not prepared to face. Kashmir's accession to the Union backed by the Moslem population, when communal frenzy was at its height, was a triumph of India's secular tradition and a proof of the confidence its leadership inspired in its sincerity and integrity.

Junagarh followed suit. Compelled by the State People's movement, Junagarh's Diwan—in the absence of the Nawab, who had flown to Karachi—was forced to request Indian troops to take charge of the administration on 8th November, 1947. India finally accepted its accession after ascertaining the will of the people through a plebiscite. Junagarh, however, had already secretly acceded to Pakistan on 13 September; and Pakistan raised quite a hue and cry and aimed its propaganda barrage at India.

Hyderabad, in the heart of the Indian Union, declared: "Hyderabad is a country and is organised as a country". The Nizam would neither agree to accede to India nor to introduce responsible government. Transfer of full power to the States' people, however, was an essential part of the relationship of States with the Union. When forced by circumstances and the logic of the situation the Nizam agreed to accede to the Union he became a virtual prisoner in the hands of the Razakars, the para-military wing of the Ittehad-ul-Mussalmin, a militant Muslim organisation; and went back on his earlier draft of the agreement between himself and the Indian Union. The Razakar Chief, Qasim Razvi, boasted that while the Indian Government were pre-occupied with the Kashmir problem he would force them to agree to the original draft where Hyderabad was to be an independent Sovereign State "in close association with the two Dominions and pompuously declared that he would conquer India and establish himself in the Red Fort. The Nizam threatened that if the Union Government did not agree to his earlier draft he would immediately enter into an agreement with Pakistan. There was no option, therefore, for India except to carry out its "police action", when the Indian army moved in and took over the State.

Other fissiparous tendencies surfaced. A movement had sprung up for setting up Dravidistan as a separate state, comprising the entire population speaking the four Dravadian languages. Even in that hour of trial when the various suffering groups should have hung together the Sikhs were demanding a separate State.

Finally, the typical pro-League and anti-India tradition of the average Britisher continued to strike at the roots. This was most eloquently expressed by Churchill. He gloated over the "horrors and butcheries" perpetrated on one another with the ferocity of cannibals by races gifted with capacities for the highest culture" that had for generations lived in peace side by side under the "broad, tolerant and impartial rule of the British Crown". He predicted a "vast abridgement of the population throughout these enormous regions constituting one of the most melancholy tragedies Asia has ever known".[25] Records Pyarelal: "On the eve of the transfer of power it had become a common-place in British circles that, in the years to come, Pakistan would be the 'last outpost of British Imperialism' while the Indian Union would be anti-British".[26] This created deep resentment in India and would have been a serious obstacle in future Indo-British relations. Mountbatten saw the danger and took special steps to explain India to the British. The last kick was administered when the British representative sided with Pakistan in the U.N., where India had complained against Pakistan's aggression in Kashmir, and India was put in the dock instead of Pakistan being named the 'aggressor', in spite of the facts having been established to the contrary by the UNO machinery itself.

So when partitioned India became free, she had a super-hostile neighbour; a most serious law and order situation, with deep schisms between various communities, with deep scars and scorched memories; a vast fifth column, whose behaviour in war could not be predicted; a large number of States, who had willy-nilly only recently joined the Union, with some of the biggest States still outside it and a bone of contention between the two countries; fissiparous tendencies etc. There was every sign that India would break up and go under some foreign power. It was this denouement which Gandhiji foresaw and that hauled him over coals. His colleagues realised it but too late. "On 16th October, 1949, speaking in New York, Pandit Nehru confessed that if they had known the terrible consequences of Partition in the shape of killings etc., they would have resisted the division of India." Maulana Azad confessed that "It was a big mistake on our part not to have listened to Bapu at that time". Exclaimed Dr. Rajendra Prasad: "If only we had known!" "As for Acharya

Kriplani, his choicest epithets in later years were reserved for those in the Congress High Command on whom he put the entire responsibility for partition—so far had his own mind travelled from the position he took up in the fateful session of the All-India Congress Committee meeting in June, 1947."[27]

The question arises that if Gandhiji saw so clearly the shape of things to come why he did not oppose it with his life. The challenge of the situation, as he saw it, could only be met by non-violence. Even his life-long colleagues, leave alone the general public, had no faith in it. Their "non-violence" had been not one of faith but of policy, a strategy to be used when nothing else was available. Today they abandoned it because they thought, however wrongly, that there was an alternative. A non-violent battle could be given even if all did not fully understand its implications. But then they had to have implicit faith in their leader. That faith too was lacking. The non-violence of the strong could not be developed in a day. As a man of non-violence he could not force his opinion on others. So he went so far as to recommend, as a loyal and disciplined soldier, to the AICC the endorsement of the partition plan which their leaders had accepted. And himself set about undoing the damage that had been done and to distill nectar out of poison single-handed on the sole strength of his faith in non-violence.

VII

THE LONE BATTLE

This lone fight only led to more intimate communion with his Maker and the effulgence of his faith enwrapped him even more closely. A central peace subsisted in the midst of endless agitation. Thus rejuvenated, he sought to solve the endless questions that challenged him at every step, through the application of the Law of Love to concrete situations that he faced, under the guidance of the Inner Voice, which he prayerfully sought every minute. And the Law of Love spread leaven—like in the land undoing the damage that the Law of Hate had done—the cancer that had spread throughout the body politic.

It was this demonstration in myriad forms of the potency of the Law of Love as an antidote to violence in this age of the atom bomb that gives this period its unique character. The atom bomb is the culmination of the violence bred in us at every step in our society and can only be countered by reversing the process by applying the Law of Non-Violence and Love at every step. Gandhiji had been doing so for half a century. But during this period the pace of development and the spelling out of the science of non-violence reached staggering proportions. It is this that makes this period historically so significant, nationally and internationally.

Having lost the battle of partition, which he had been fighting valiantly, Gandhiji proceeded to Noakhali via Srinagar, Patna and Calcutta—to keep his promise to the Hindu minority there, who had stayed back on his assurance that he would "do or die" with them, and where things at the moment were not too reassuring. He always said that he was fighting the battle of India in Noakhali. If he could set things right there and fill the minority with the courage of the non-violence of the brave, it would break the vicious and ever-widening circle of reprisals and counter-reprisals and set in motion a chain reaction of friendship and brotherliness. But on reaching Calcutta he found the Muslim minority in such a state of panic that he felt that without ensuring their safety and restoring their self-confidence, he could not help even the Hindu minority in Noakhali. After the Great Calcutta Killing of August 16, 1946—the result of Jinnah's call for Direct Action and executed with "consummate skill" in Calcutta by Suhrawardy—the two communities had lived in perpetual fear of each other and there were certain areas where one or the other community did not dare to enter even during day-time. With the advent of Independence and the exit of the League Ministry the Hindus felt their day of revenge had come. The first reaction of the mob to Gandhiji's mission of peace was ferocious. But within two days his ministry of Love worked wonders and led to fraternisation between the two communities. But on 31 August, 1947, the trouble flared up again on the receipt of news of Punjab killings. The whole of Calcutta seemed to be going up in flames. The communal feelings ran so high that Gandhiji could stem the tide of hatred only by staking his life. His fast started on 1st September, 1947, and was broken on the 4th. This three-day fast deeply moved the hearts of all sections of the people. Hatred vanished, fraternisation of the last 15 days returned. Truck loads of arms were surrendered to Gandhiji by the people gone mad, whose sanity had been restored by Gandhiji's penance. The leaders of the warring communities signed the following document:

> "We the undersigned promise to Gandhiji now that peace and quiet have been restored in Calcutta once again, we shall never allow communal strife in the city and shall strive unto death to prevent it."

The signatories were: N.C. Chatterjee and D.N. Mukherjee of the Hindu Mahasabha, Shaheed Suhrawardy as the leader of the Muslim League Parliamentary Party of West Bengal, R.K. Jaidkha, the Punjabi leader and Niranjan Singh Talib, the Sikh leader.[28] As Gandhiji wrote in the Harijan ("Miracle or Accident"), "The joy of fraternisation is (was) leaping up from hour to hour". The impossible had become possible. The Miracle of Calcutta had its reverberations all over. Mountbatten said that what they had singularly failed to do in the Punjab with 55,000 soldiers had been achieved by our "One-Man Boundary Force" in Calcutta and he pressed him to come to Punjab to apply his healing touch.

Now he had earned the right to be heard by Pakistan. So he proceeded for Punjab, which was burning. But man proposes, God disposes. Victims of Pakistan's brutality poured into Delhi "where at one stage every fourth person was a refugee".[29] They were men and women, thousands upon thousands, who had passed through the worst horrors, indignities and dishonour and had consequently been dehumanised. They were let loose, as it were, upon the Muslims of Delhi, whom they murdered, dispossessed of their homes and businesses; and they had no option but to flee their homes and fill the refugee camps.

So Gandhiji had two types of refugees on hand. As regards the non-Muslim refugees:

> "There were thousands and thousands of them in various camps, herded together like cattle, lacking even elementary decencies of life, not to speak of food, clothing or shelter. Misery was writ large on their faces. Gandhiji suffered with them. But they could not see it. Their wounds were fresh and bleeding; revenge seemed sweet to many."[30]

Gandhiji's talk of forgiveness irritated them. "Yet they clung to him. There was something in him which drew them to him in spite of themselves. They might be angry with him, even quarrel with him but in their heart of hearts they knew that he was the friend of all and enemy of none; he loved them and theirs with a love greater than they themselves were, perhaps, capable of. They wanted him to guide them even when they were not prepared to follow his advice."[31] This is how the law of non-violence works—slowly, steadily, but persistently though unseen.

His visit to Purana Qila, where 75,000 Muslim refugees were awaiting evacuation to Pakistan, presented a different picture. There some Muslim Leaguers, "after doing as much mischief as they could", established themselves as "leaders" and defrauded the refugees of their rations with the result that 10,000 refugees were going short of rations every day. They had worked up the refugees who were consequently in a very ugly mood; and for some time his life seemed to be threatened. But calmly he faced the crowd and told them that God was one and people of all religions were all one to Him. They should shed anger and fear. He was confident that God would set right what man had spoilt. For his part he had come to "do or die"—restore sanity, friendship and fearlessness among people or die in the attempt. Comments Pyarelal:

> "There was nothing new in the words but they heard the passion in the voice and saw in the agonised resigned look on that worn out face how deeply he felt for and suffered with them and all those who suffered. Scowling ceased. Soon tears were trickling down the cheeks of some. They narrated to him the tale of their hardships and sufferings. He listened to them with deep sympathy and promised to do all he could for them. Those who were thirsting for his

blood a few moments before were now his friends. They respectfully escorted him to his car and stood there in silence as it passed out of the camp with him seated in the back seat, his hands folded to bid them goodbye and furrows of deep pain on his face."[32]

As lynx-eyed he continued to spot out the weaknesses of his environment and batter at the conscience of those around him—the political leaders, officials—the refugees' active hostility ceased but stray incidents of violence and discrimination continued. The general atmosphere of moral apathy prevailed. While the Union Government did all that was possible, that was not enough. Moreover, governments can keep law and order but they cannot effect a change of heart, cannot effect moral regeneration. The squeeze of Muslims continued. Their properties were being occupied by the refugees. Against this cold war he felt helpless and this in the face of the moral challenge irked him most. Then there was the withholding of Rs. 55 crores, which was still due to Pakistan out of its share of cash balances of undivided India, and which, though legally correct, was not in the best tradition of India's generosity. Mountbatten called it the "first dishonourable act" of the Indian Union Government. The majority of Muslims continued to be unrepentant and silently appreciative of Pakistan's continued acts of brutality, and hostile to the Indian Union. "I am in a furnace", he wrote in a letter. "There is a raging fire all round. We are trampling humanity under foot."[33] Out of the depths of his anguish came the decision to fast which would be terminated if and when there was a reunion of hearts of all the communities "brought about without outside pressure but from an awakened sense of duty". His statement read out at the evening prayer meeting (12 January 1948) explained: "The final conclusion has flashed upon me and it makes me happy". The issue was nothing less than "the regaining of India's dwindling prestige and her fast fading sovereignty over the heart of Asia and therethrough the world". He went on: "I flatter myself with the belief that the loss of her soul by India will mean the loss of the hope of the aching, storm-tossed and hungry world".[34]

The fast began at 11.55 A.M. on 13 January. The effect was instantaneous. Within 24 hours the Union Cabinet agreed to release the Rs. 55 crores to Pakistan. The Muslim world was deeply stirred and messages of sympathy and support came in from Muslims in India and abroad—the Nizam of Hyderabad, Nawabs of Bhopal and Rampur, etc. The President of the Bombay Muslim League showed keen awareness of the issues at stake. Gandhiji's fast was "A challenge to Hindus, Muslims and Sikhs. . . to save Hinduism, Islam and Sikhism". He appealed to all to do everything in their power to save "our country and religion".[35] The Director of the Islamic Press, London, said: "Your momentous action to save India and Pakistan from plunging into fratricidal war is appreciated by humanity all over the world. I pray to Allah that you will succeed in changing the minds of the leaders and peoples".[36] Especially significant was an injunction by a Muslim divine from Bareilly which was the type of reaction from Indian Muslims that Gandhiji had been trying to evoke without success so far. He said: "There is no greater friend of Mussalmans than you, whether in Pakistan or Hindustan. . . . My heart bleeds with yours at recent Karachi and Gujarat (Pakistan) atrocities, the massacre of innocent men, women and children, forcible conversions and abduction of women. These are crimes against Allah's creation. I order my followers in Pakistan and appeal to the Pakistan Muslims and Government to put an end to these shameful, un-Islamic misdeeds and express unqualified repentance. My order to my followers and to the Muslims of Hindustan is. . . (that) they must remain loyal to you and the Union Government to the last. . . condemn the misdeeds of their co-religionists in Pakistan in unambiguous and emphatic terms to create public abhorrence against such actions. It is high time that Musalmans should realise that their sincere loyalty to the Union and their leaders' confidence in themselves are the only safeguards that can protect them. The secret desire to look to Pakistan for guidance and help will be their doom. Pray break your fast and save Hindustan and Pakistan from ruin, disaster and death".[37]

"The response of Pakistan to Gandhiji's fast", writes Pyarelal, "exceeded everybody's expectations". Gandhiji immediately become their "greatest friend" from being the

Muslim League's enemy number one. The following utterances[38] by Pakistan leaders tell their own tale:

> "The appalling degradation of morale . . . which has manifested itself in both India and Pakistan during recent months called for a drastic remedy and Mahatma Gandhi has lodged his protest against these conditions in the extreme form. . . . If the present state of affairs lasts, our hard-won freedom is bound to come to an inglorious end"—Raja Ghazanfar Ali Khan, Minister for Relief and Rehabilitation. "No country in the world has produced a greater man, religious founders apart, than Mahatma Gandhi"—Feroze Khan Noon. Mian Mumtaz Khan Daultana said that it was their foremost duty to appreciate "the feelings which Mahatma Gandhi's fast reveals towards the Muslims. This shows that at least there is one man in India who is ready to sacrifice even his life for Hindu-Muslim unity. . . . I assure Mahatma Gandhi from the floor of the House (West Punjab, Pakistan Assembly) that his feelings for the protection of the minorities are fully shared by us". The Chief Minister, the Khan of Mamdot, speaking on his own and his colleagues' behalf expressed "deep admiration and sincere appreciation with great feeling of concern for Mahatma Gandhi's great gesture for the furtherance of a noble cause . . . no effort will be spared in this province to help in saving the precious life."

All these eminent leaders of Pakistan had been responsible for executing the injunction for Direct Action.

The refugees on their part did something which would have been unthinkable before. There was a telegram from Muslims who had moved to Karachi whether now they could return to their own homes in Delhi. By the evening 1000 refugees had signed the following document:

> "Your fast has moved human hearts all over the world. We cherish the noble object and share your anxiety for which the fast is undertaken. . . . We give you our fullest assurance that we shall welcome the return of Muslims to their homes in Delhi from Karachi or from any part of

> Pakistan. We shall work for making India as much a home for Muslims as it is for Hindus, Sikhs and other communities of India. Pray break your fast to save India from misery."[39]

Those who had occupied Muslim houses promised to vacate them and face the bitter, biting winter in refugee camps with their women and children. The whole city was astir. Everybody was trying to do what he could enable to Gandhiji to break his fast. Mixed processions of Hindus, Muslims and Sikhs in their thousands converged on Birla House where Gandhiji was fasting. "One of them was nearly one hundred thousand and over a mile long."[40] Ultimately the fast was broken on 18th January 1948 when the representatives of all the parties signed a document assuring Gandhiji that the Muslim refugees would be able to come back to their own homes, conduct their business unhindered as before, the religious places occupied by the non-Muslim refugees would be returned and the Muslims would be able to hold the annual fair at the Khwaja Qutbuddin's mausoleum unhindered.

Having staked his all for them Gandhiji had earned the right to chastise all—whether in India or in Pakistan—in the bluntest possible way for their dereliction of duty and bring them to the right path. This cleaned many dark, dingy and dangerous corners of our personal and public life. The task which Gandhiji accomplished in Delhi was much harder than what he faced in Calcutta, where the problem had not been complicated by the refugee problem. But the hardest was yet to come which Gandhiji accomplished in One Perfect Act, through which he had been wanting to demonstrate the supreme power of non-violence—the act of dying with perfect love for the assassin in his heart and God's name on his lips.

The moment of supreme trial came soon after when a member of the most rabid Hindu communalist group, who had decided to kill him for his "pro-Muslim" and "anti-Hindu" activities, shot him dead on the 30th of January when he was proceeding to the prayer ground. In his death with God's name on his lips till the last conscious moment Gandhiji lived up to his highest aspiration. The emotional waves it set into motion all over the world demonstrated, what nothing else could have done, the supreme power of non-violence and its all-pervasive effect. A very rough idea of the tumult that his fast and his ultimate supreme sacrifice created may be had from some of the messages that were received, statements that were made in the press, or articles that appeared in the papers. The Liberal daily News Chronicle wrote after his fast: "The mystery and power of a frail old man of 77 shakes the world and inspires it with new hope". The journal continued: "The success of Mahatma Gandhi's fast demonstrates a power which may prove greater than the atom bomb and which the West should watch with envy and hope. At the time when tempers in India and Pakistan were rising fast, men have been halted in their tracks. . . . In Western Europe and in America, it has long been recognised that Mr. Gandhi is wielding a force against which no material weapons can prevail, he is mobilising man against the things which man created and man in the end will always be greater than his creations".[41] The Washington Post commented as follows on the successful termination of his fast: "The wave of relief that has swept the Western as well as Eastern world over the knowledge that his fast has been broken in time to spare his life, affords a measure of the sainthood with which he has been invested. . . . In the West no less than in the East there is need for the assertion of some spiritual and moral power as Gandhi--some moral suasion which will arrest the passions flinging men headlong down the road towards fratricidal conflict".[42] Describing Gandhiji as a prophet who lived "far ahead of the time", General Douglas MacArthur said: "In the evolution of civilisation, if it is to survive, all men cannot fail eventually to adopt his (Gandhiji's) belief that the process of mass application of force to resolve contentious issues is fundamentally not only wrong but contains within itself the germ of self-destruction".[43] The New York Times commented: "He has left as his heritage, a spiritual force that must in God's good time prevail over arms and armaments and the dark doctrines of violence".[44] Albert Deutsch wrote in PM, a New York newspaper: "There is still some hope for the world which reacted as reverently as it did to the death of Gandhi".[45] The UNO interrupted its proceedings to pay homage to Gandhiji. The British representative at the UNO, Philip Noal-Baker, described Gandhiji as "the friend of the poorest, and lowliest and lost" and said, "His greatest achievements are still to come".[46] This futuristic dimension of Gandhiji's influence was voiced by Pandit Nehru in the Indian Constituent Assembly: "Great men and eminent have monuments in bronze and marble set up for them, but this man of divine fire . . . lives in the hearts of millions and he will live for immemorial ages. . . . In ages to come, centuries and may be millenniums after us, people will think of this generation when this man of God trod the earth".[47] An instance of how pervasive, far-reaching, knowing no limits of physical proximity, the Law of Love works, is the manner in which many who had never even seen Gandhiji, felt as if some near one, deeply loved, had passed away. "I never saw Gandhi . . . I do not know his language, I never set foot on his country", "and yet I feel the same sorrow as if I had lost someone near and dear. The whole world has been plunged into mourning by the death of this extraordinary man".[48] The secret of this all pervasive power was his identification with and love for all humanity. He said: "I believe in the absolute oneness of God and, therefore, of humanity. What though we have many bodies ? We have but one soul. The rays of the sun are many through refraction. But they have the same source. I cannot, therefore detach myself from the wickedest soul nor may I be denied identity with the most virtuous".[49]

Even while giving shock treatment to the nation in a state of deep mental and spiritual disorder through the intensive application of non-violence at white heat, he knew that non-violent strength of the people could not be built over-night. And so even while engaged in his most, gigantic battles—the battle of Partition and undoing the damage of Partition—he did not forget constructive work—through which alone this strength could be built—and continued to guide the various organisations that he had built up for the purpose. The basic idea behind all constructive work was to enable people to pull themselves up by their own boot-straps. That way alone they could take their destiny in their own hands. Through constructive work Gandhiji wanted to lay the foundations of a non-violent order of society—a system which would bring out the best in the individual instead of the worst as at present. It was a highly decentralised political and economic order that he was aiming at. He was trying to reorganise the Congress to be an agency to demonstrate how power was to be controlled in a non-violent society. He also spelt out the way internal disorder and external aggression were to be met non-violently. Many of these ideas, especially in regard to external aggression, which he could not demonstrate simply because there was no occasion to put them into practice, look quixotic. But it would be unfair to him to judge them when theoretically stated. For he was one of the most original and resourceful of men who knew how to put his "quixotic" ideas into practice by "quixotic" methods beyond the knowledge and capacity of the intellectual. Their very novelty stood in the way of their easy comprehensibility. After his successful fast at Calcutta people were pressing him to go to the Punjab but the Sardar and Jawaharlal did not want him to go there just then but they wanted him to be in Delhi for advice. To this Gandhiji characteristically replied: "If I am not going to the Punjab, would I be of much use in Delhi as an adviser or consultant. I fancy, I am not built that way. My advice has value only when I am actually working at a particular thing. I can only disturb when I give academic advice as on food, clothing, the use of the Military".[50] A brief sketch of the social order that Gandhiji aimed at and the science of Satyagrah, which would be the means of bringing it into being and sustaining it will be given in a subsequent chapter.

While the constitutional and political struggle dominated the period, various plans were being drawn up in the various departments of the Government of India and of Provincial Governments as a part of Post-war Reconstruction. During the war it became clear that in a global conflict regional self-sufficiency was essential. For essential supplies can be cut off any time. Secondly, while the British were still the masters, they had to justify their existence in the eyes of the world and their own enlightened compatriots at home. Thirdly, as their policy was to delay transfer of power as much as possible, a sop to nationalist opinion in the form of development was a good strategy. Similarly the Congress on its own, with the help of Indian scientists, economists and industrialists were drawing up their plans in preparation for the Independence they saw coming. So did the business community draw up their plans.

The results of these efforts came very handy when after Independence India launched on planned development.

Thus ended one of the most tumultuous periods in Indian history. In a nutshell it had a three-fold significance. India won her Independence, which gave new life and encouragement to liberation struggles all over the globe, especially in East and South East Asia. Secondly, non-violence emerged as a global force for social, economic and political transformation. As India's struggle depended on generating non-violent strength of the masses, it endowed the struggle, which was predominantly political and constitutional on the surface, with deep educational import. Thirdly, as Independence neared and was finally achieved, every interest started planning for India of its dreams. Out of this ferment emerged Independent India's planned effort. Ironically, the British Government had started this process after the war to delay, if not to stop, the advent of independence by diverting attention from struggle for independence to development.

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TWO

THE EDUCATIONAL SCENARIO— A BIRD'S EYE VIEW

I

EDUCATIONALLY A MOST SIGNIFICANT PERIOD

Normally in such a tumultuous period one would not expect much attention being given to such an "unexciting" subject as education, where results are too long-term to extort priority, where even in the constructive age, beginning with Independence, the approach to education has been residual in spite of much lip-service paid to human resource development. But it turned out to be one of the richest periods in the history of educational development, when more fundamental thinking on education was done than at any time before or after. It was primarily due to the constructive genius of Mahatma Gandhi, who had started the national debate on education as soon as he entered the Indian political scene. The political struggle that he launched was itself primarily educational, depending upon evoking and building up the non-violent strength of the masses. *Secondly*, mass education had long been a mounting demand of the Indian leaders as being basic to constitutional advance towards democracy. *Thirdly*, in a period of mass awakening education was the first consumer expectation from popular leaders and the impetus that they gave during the three years (1937-40) that they were in power, could not be stopped even during the period of the caretaker governments that followed. *Fourthly*, the independence that the leaders saw coming forced them to think of the type of education they would require to build up an independent India. *Fifthly*, the exigencies of the war forced upon the British the necessity of regional self-sufficiency to face an emergency. This forced even the unwilling colonial government to encourage industrial development within limits. And industrial development required technical man-power. The interdependence of general and technical education forced them to think of the entire spectrum of education. *Sixthly*, the Indian educationists got their first opportunity to make their special contribution to nation building. This was a much more familiar field where their sophistication would be valued instead of being irrelevant as in a mass struggle. *Finally*, the voluntary agencies interested in education, but working on the margin of the mainstream of the political struggle, found that they could come in the centre of it and make their own contribution in strengthening the current of educational activity and determining its direction.

II

GANDHIJI'S IMPACT

Non-formal education

The most unique feature of the period was the non-formal education provided by the national struggle. It was non-formal and not informal in the sense that it had a deliberate design to inculcate secularism, friendliness and brotherhood, fearlessness, sacrifice and dedication, order and discipline in the masses throughout the land. Children, men and women—millions upon millions—heard, thought, felt, dared and suffered for independence and national unity. There was no slumber. The whole nation was awake and vibrant. When they erred, the teacher par excellence, through his vicarious suffering, brought them to the right path. His fasts shook them to the depths of their being, with the intensity of a life-giving earthquake, and transformed them. It was education of the highest type imparted through living and imparted by a teacher who himself lived every atom of what he taught.

Designing a national system

But Gandhiji had also been experimenting with and evolving a formal system of education that could be put in the hands of ordinary men and women and yet would produce the necessary revolutionary potential to bring into being a non-violent social order towards which society must tend if it was to save itself from self-annihilation. As the Congress assumed power in 1937 in seven of the eleven provinces, his scheme of Basic Education was accepted as the pattern for the education of children at the elementary stage, to be enlarged into a system of life-long education in the National Education Conference, Sewagram, in 1945. His scheme, he explained, had been conceived "as the spearhead of a silent social revolution fraught with the most far-reaching consequences. Basic Education was to include all subjects up to the Matriculation standard minus English plus a substantial rural handicraft to which knowledge of the various subjects was to be correlated. According to his wont, Gandhiji immediately set about working out his model in Sewagram under his direct guidance. It was this that endowed his advice with such practical value. The children from the Sewagram Basic School came out in 1946 and he immediately set about guiding the building of the Post-Basic model thereon. His murder in 1948 prevented him from guiding the Post-Basic model and subsequently the university structure thereon. That work was left to his close associates. But he had left the general guidelines even for the university. His complete system arising from his philosophy of life—a philosophy whose relevance is increasingly being recognised by a war-weary and frightened world—with its stages closely inter-linked, is of such fundamental importance that it has been dealt with in a series of chapters in a subsequent section. Here only a broad review is given of the march of events.

Gandhiji's basic ideas were worked out in educational terms by the Zakir Hussain Committee, which submitted its report in December 1937. Basic Education was thereafter accepted by the Haripura Congress in 1938. The first training school—Vidya Mandir Training School—for training basic teachers was opened in April 1938, and thereafter the basic education programme spread gradually in the Congress Provinces and the State of Jammu and Kashmir as an experimental measure. The programme included the opening of training schools and basic schools as well as the conversion of existing schools into basic schools. Special machinery was also set up to administer the scheme. Institutions of National Education like the Jamia Milia Islamia, Delhi, Gujarat Vidyapeeth etc., also came in. The scheme was examined by a CABE Committee under B. G. Kher. The Education Reorganisation Committees set up by the various provinces accepted the principles of basic education and many of them adopted the syllabus of the Hindustani Talimi Sangh—an organisation set up by Gandhiji to guide the movement—with minor changes to suit local conditions. The scheme evoked considerable enthusiasm and made slow but steady progress. The first stock-taking was done in the first Conference of Basic National Education in October 1939 at Poona. On the basis of experience, faith in correlated teaching was reaffirmed and the focus of integration of knowledge was expanded to include the social and natural environment.

With the resignation of the Congress Ministries in 1940, the movement received a setback. Basic Education was given up in most provinces and in others—Bihar, Bombay and the State of Kashmir—it was mostly carried on in a lower key. Voluntary organisations, however, carried on their work. The most striking event of the period was the taking over of the programme by the people in Orissa, when the provincial government closed basic schools. Seven of the fifteen basic schools thus continued their work. It was a measure of the extent to which basic education met the real needs of the people. Ultimately, however, when all the workers and teachers were arrested, these schools were also closed. Most of the workers of the Hindustani Talimi Sangh had been arrested and the movement got into scattered pockets of workers. The first attempt to bring the workers, including State Governments, where the work of basic education was still going on, together was the holding of the second Basic Education Conference at

Jamia Nagar, Delhi, in 1941. Its most significant resolution was as follows:

> "This conference records with satisfaction that the reports on the working of basic schools run by the Governments, local bodies and by private enterprise are almost unanimous that general standards of health or behaviour as well as intellectual attainment, are very encouraging. The children in basic schools are more active, cheerful, self-reliant, their power of self-expression is well-developed, they are developing habits of cooperative work, and social prejudices are breaking down. Considering the difficulties inherent in the initial stages of a new scheme of education, involving a new ideology and a new technique, the progress reported holds out the promise that even better results can be expected in future."

The next landmark was the Sewagram Conference of 1945 where Gandhiji extended the underlying ideas of basic education to all education—"from the moment of conception to the moment of death"—and the Hindustani Talimi Sangh set up Committees to work out the scheme of pre-basic, adult and post-basic education. Gandhiji was able to give sufficient guidance to Committees to enable them to draw up the patterns according to his ideas. Work was started immediately after the Committees had reported. He was able to guide it except in the case of post-basic education. The scheme of the university was, however, left for his trusted colleagues to draw up and implement. As, according to his wont, it was to emerge from the post-basic experience—and work on the post-basic stage had only just started when he was murdered—Gandhiji could not draw up a scheme for this stage of education.

III

A NATIONAL SYSTEM OF EDUCATION —OTHER ATTEMPTS

Compared to Gandhiji's gigantic attempt at a radical transformation of the educational system—to forge it as an instrument of bringing into being a new social order, of global significance and yet rooted in the economic condition of the masses and the cultural traditions of the country—the other attempts at delineation of a national system of education appear as mere tinkerings with the existing system, designed by our former colonial masters for colonial purposes. And yet they are important and deserve a mention. For it was these documents that moulded educational policy—even though to leave the existing structure primarily intact, with disastrous consequences.

National Planning Committee's pattern

Two attempts in this period may be just mentioned. For they only sketch out modified versions of the existing pattern. The first such attempt was made by the National Planning Committee set up by the Congress in 1938, as a part of their over-all plan of national reconstruction. After Kindergarten, they recommended free and compulsory primary education of 7 or 8 years, beginning at 7 years of age. The subjects of study were the same as those in the Wardha Scheme with the addition of algebra. The medium of instruction was also to be the mother-tongue. Units of weights and measures were to be Indian. But the resemblance with the Wardha Scheme was superficial, as the essentials of the latter—vocational education and correlated teaching—were rejected. It appears that there had not been much contact of the Committee with Mahatma Gandhi.

After the primary stage the vast majority of students would go to technical or vocational schools, which would be free and compulsory. These would be either wholly practical or would contain both theoretical and practical instruction. Students could also be apprenticed in factories, workshops or smaller establishments and could also receive some remuneration at a later stage in consequence. The theoretical portion would include both general and relevant scientific education. The courses would last for 3 to 5 years. Afterwards students would join factories, workshops and independent establishments. They could later come to appropriate institutions for refresher courses. After this industrial training and experience, some would go to Teachers' Training Schools for 2 to 3 years for equipping themselves as teachers in these Technical or Vocational Schools.

Other students, after the primary stage, could go to secondary schools, which would be free for the meritorious. Here there would be Arts and Science subjects, taught through the mother-tongue. A foreign language, preferably English, however, would also be taught. Instruction should also be given in physical training and gymnastics.

After the ordinary secondary schools, students should be able to go in for professional courses or to universities for pure arts and science courses for 3 or 4 years' duration, followed by post-graduate courses. The professional courses would be provided in Teachers Training Schools (for 2 to 3 years); Law, Engineering and other professional schools (with courses varying in duration from 3 to 5 years); and in engineering and technical institutions of Polytechnic standard (4-Year courses). From engineering and technical courses, students would join workshops and factories, with a provision of subsequent refresher courses. They could also go into post-graduate schools for Post-Graduate Diplomas.

The All-India Education Conference plan

The plan of educational reconstruction adopted by the Conference held at Lucknow in December 1939, visualised education for the pre-school child in a variety of schools with varying nomenclatures. This was to be followed by free and compulsory education of 7 years (from 6 to 13 or 7 to 14), introduced by stages. Education in standards I-IV was to be immediately compulsory, compulsion being extended up to standard VII as soon as circumstances permitted. The Conference was indifferent whether the education should be of the ordinary primary type or basic type. After standard VII continuation schools or classes, for the further education of those who entered life, were to be organised.

The secondary stage of 4 years' duration would be a diversified one, providing a large number of alternative parallel courses, ending in a School Leaving Certificate of equal value. There was to be, however, as at the primary stage, no external examination. The certificate would be based on an Internal School Leaving Examination plus school records. The alternative courses would be: General Course with Practical work (some craft work); General and Commercial Course; General and Industrial Course; General and Teachers' Training Course; General and Pre-Medical Course; General and Some Economics Course; and General and Art Course. Art was further diversified into various channels: Drawing and Painting, Music and Dancing, and Architecture.

The university course was to consist of a diversified undergraduate course of 3 years (17 to 20 or 18 to 21) followed by a Post-Graduate course of varying duration. The Under-Graduate course was to consist of the following branches: Arts Course, Science Course, Commercial Course, Agricultural Courses, Techhical Courses, Fine Arts Courses, Home Economics Courses, Medical Courses and Education Courses for Teachers.

The Sargeant Report

The most comprehensive attempt to formulate a plan of all-round educational reconstruction and development was made in the Report of the Central Advisory Board of Education on Post-War Educational Development in India. The Central Advisory Board of Education ever since its revival in 1935, had been examining various aspects of education. This work reached a stage of completion by 1943 and was consolidated into a plan of Educational Development as a part of over-all plans for Indian reconstruction after the war. Being the result of such sustained work by eminent educationists and Provincial and State Governments under the leadership of an eminent British educationist like John Sargeant, the scheme is of considerable historical importance. It was the best draft so far prepared of a national system of education. Gandhiji's system was still being worked out from the ground upwards and till then had not gone beyond the Basic stage. Further, his system was so radical and had such far-reaching implications that even though it was based on the bedrock of the Indian social reality, it could not be expected to be understood and acted upon by the average Indian intellectual, long accustomed to adore Western models. So it was not Gandhiji's system but the Sargeant Report which became for long the bible of the Indian bureaucracy and the average Indian educationist. The Report, therefore, deserves a detailed mention.

The Report deprecated the present neglect of pre-primary education for children of 3-6 years and emphasised the necessity of making adequate provision for them in independent schools or in classes attached to primary schools, on a free but voluntary basis. The objective at this stage was to give the child "social experience rather than formal instruction". The teachers should invariably be especially trained women.

Free and compulsory education of 8 years' duration, broadly on basic lines. and broken into Junior and Senior stages provided in different schools, was to be provided in 40 years to all children. The differences between basic education as Gandhiji had conceived it and as it was accepted in the Report have vast economic and social implications which are discussed subsequently in detail. The Report lays rare emphasis on the training of and adequate salaries to teachers. As a matter of fact the main hurdle in the faster expansion of Basic Education was the dearth of adequately trained teachers. The number of women teachers were to be very considerably increased.

At the age of 11, the brighter children from Senior Basic Schools should be selected by appropriately devised methods for High Schools of 6 years' duration. Those not selected on the basis of merit could be admitted to a limited extent on payment of full cost of their education. Education of those selected on the basis of merit would be liberally assisted financially in the form of freeships, scholarships etc., so that no poor but meritorious boy was held back from education. These schools would be mainly of Academic or Technical type. "The objective of both should be to provide a good all-round education combined with some preparation in the later stages for the careers which pupils will enter leaving school."[1] "The curriculum in all cases should be as varied as circumstances permit and should not be unduly restricted by the requirements of universities or examining bodies."[2] To attract the right type of qualified and trained teachers adequate salaries were necessary. The "salaries paid in all recognised schools, whether maintained by the State or by private bodies, should not be less than those prescribed by the Central Advisory Board of Education".[3]

In regard to universities the Report concludes: "Indian universities, as they exist today, despite many admirable features, do not fully satisfy the requirements of a national system of education".[4] To raise standards, admission should be on a selective basis, supported by a generous system of financial assistance to the poor and meritorious. Structurally, the Report endorses, the Saddler Commission's recommendation of splitting the Intermediate course, with one year going to the School and one year to the University, giving the undergraduate degree the minimum required period of 3 years. The 11-year school thus recommended dominated the scene for quite a long time till replaced by the 10+2+3 system recommended by the Education Commission of 1964-66. This was, however, perhaps hinted at in the Sargeant Report when it said: "The present Intermediate course should be abolished. Ultimately the whole of the course should be covered in the High School but as an intermediate step the first year of the course should be transferred to High Schools, and the second to universities".[5] The tutorial system should be widely used and closer relations established between the teacher and the taught. High standards in Post-graduate and Research work should be emphasised. The most important recommendation of the CABE, however, was the setting up of a University Grants Committee, on the model of the U.K. Committee, to coordinate the work of the universities to prevent unhealthy competition between the universities and prevent unnecessary duplication in provision of facilities which leads to waste and makes the tying up of the needs of the community with the output from universities, difficult and leads to deterioration of the employment prospects of the products. It would also ensure the rationalisation of the opening of new universities, relating it to effective demand. Adequate provision of financial assistance to the universities and the coordination of Central and Provincial assistance. would also be its function. It should, however, be statutory to be able to discharge its duties. The existing Inter-University Board performed only advisory functions and had no power to discharge the functions for which the University Grants Committee was recommended. At the university stage also the Report emphasised the prime necessity of revising the conditions of service and salary scales of university and college teachers where the existing scales were not attracting the right kind of teachers.

To meet the need of post-war industrial development and to meet the needs of those who best learnt through practical subjects, the CABE emphasised the necessity of drawing up and maintaining an efficient nation-wide system of technical education at all stages and endorsed the recommendations of its Technical Committee in this regard. The committee had recommended that education should be given a more practical bias from the very beginning and technical education at all stages should be regarded as equal to academic education in status and prestige. Technical education should include commercial education and education in art in relation to industry. Agricultural education should be regarded as an essential branch of technical education and Senior Basic Schools and High Schools in rural areas should have an agricultural bias. The subject being of such fundamental importance to this country it should be considered by a special committee of experts.

The Committee recommended three types of institutions: Junior Technical or Industrial or High Schools, Technical High Schools and Senior Technical Institutions—the first two providing only full time courses, while the last would provide part-time courses as well. Part-time courses should be organised in consultation with the employers and according to the needs of the locality. Part-time classes should be organised preferably in the day-time through a system of day-release by the employers. Whenever circumstances permit, polytechnics should be preferred to monotechnics. As regards the courses of studies to be provided, the committee recommended a two-year course to be provided in Junior Technical Schools for Senior Basic (Middle) School leavers at the age of about fourteen. Senior Technical Schools should provide a six-year course for selected Junior Basic (Primary) School leavers at about the age of eleven. The first three years were to be mainly devoted to general subjects. A three-year full-time Diploma Course should be provided in Senior Technical Institutions after students have passed the Technical High School or an equivalent examination. After this, students can take up an Advanced Diploma Course of two years. These institutions would provide a part-time three-year certificate course for those in employment or those who have passed the Technical High School or equivalent examination. These students can go in for a part-time two-year Advanced Certificate Course. Classes, recommended the Committee, should also be organised in individual arts, crafts and other subjects related to industry and commerce for which there might be a sufficient demand.

The Committee also made recommendations in regard to various classes of teachers—both general and technical—the Principal and Workshop or Laboratory Assistants. The Committee also emphasised the necessity of industrial experience by technical teachers. To encourage teachers of all subjects to remain in touch with the appropriate branch of industry or commerce, they should be permitted to do consultancy practice within such limits as does not interfere with their regular duties as teachers.

Other recommendations included the necessity of locating technical institutions in industrial and commercial areas but an equal access to students from all areas, for which purpose technical education should be organised on an All-India basis. While Junior Technical, Industrial or Trade Schools and Technical High Schools should be controlled by the Provinces, all higher technical education should be controlled by the Central Government for which purpose it should set up a controlling body consisting of all concerned interests. The APTI, which had been established, was a very useful body and should be duly represented on this body. The Committee was also of the view that technical education should be under the charge of the Education Departments of the Central and State Governments in close co-operation with other concerned departments. There should be a special inspection staff for these institutions.

In view of the vast problem in India of illiteracy the Report emphasises the necessity of organising a large programme in the form of literacy campaigns spread over 20 years to remove illiteracy. In this stupendous task everybody should be encouraged to help—students, voluntary organisations etc.—

though the main responsibility will remain that of the State. While in the beginning the emphasis would have to be on the liquidation of illiteracy, this would need to shift to providing adult education in its full sense. Plans should be drawn up for both these programmes and an adequate number of teachers of requisite qualifications and qualities should be recruited and trained before the plans were launched to ensure their success.

The pivot round which the whole plan of the CABE revolves is the recruitment and training of teachers. The latter is perhaps the most stupendous problem that will be faced by the plan. The Report estimates that the Plan would need additional 20,00,000 non-graduate and 1,80,000 graduate teachers who will need to be trained and provided refresher courses thereafter. The existing training facilities will hardly suffice to meet the training needs of teachers already in the system and so recommends the creation of large scale training facilities in new training colleges and Education Departments of the universities which will need to be established. The courses should be practical and strictly oriented towards the needs of schools where the trainees would have to teach after their training. "The total net cost", says the Report, "of training the additional teachers required for a national system will amount, including maintenance, where necessary, to Rs. 1,59,94,98,250 over a period of thirty-five years or an average of Rs. 4,56,99,950 a year."[6]

An elaborate plan for health and physical education has also been included as a part of the national system. "The cost of the School Medical Service, including provision of meals and special schools etc., has on the analogy of other countries, been estimated at 10 per cent of the total expenditure on the schools. Provision has been made in the estimates of the cost of the national system at the appropriate stages".[7]

Provision has also been made for the education of the physically or mentally handicapped as an essential part of a national system. It has so far been mostly neglected by the State. Whatever has been done has been largely done by voluntary effort. As far as possible, recommends the Report, the handicapped should not be segregated and their special needs should be met in ordinary schools. The blind and the deaf requiring special equipment and specially trained teachers, however, would need special schools. It may be necessary to set up Central institutions for training the teachers required for them. It is essential to train the handicapped, wherever possible, for training the handicapped in remunerative employment. In the absence of reliable data, the Report has included 10 per cent of the total expenditure on Basic and High School education on account of the services required for the handicapped.

To provide for recreative and social activities, which is an essential part of a modern system of education, the Report has recommended the organisation of a Youth Movement for the age-group 14-20 on an all-India basis, under well-trained leaders, who might be recruited from demobilised officers and NCOs. The provision of recreative and social activities for the adults should be an essential part of any Social Services Scheme. A provision of Rs. 1 crore has been included in the Plan on an ad hoc basis.

The Report has recommended the creation of Employment Bureaus, run by the Education Departments, in co-operation with similar machinery set up by other agencies, to enable the output of educational institutions to take full advantage of available employment opportunities. About Rs. 84,00,000 has been included for such bureaus, excluding those by institutions of university rank.

In order to implement the Plan, the Sargeant Report recommended the following administrative arrangements. Except university and higher technical education requiring coordination at the All-India level, education should remain the concern of the provinces. Where the Indian States take part in the national system, it may be necessary to group the smaller States into a viable educational unit or attach them to larger States or contiguous provinces. Much closer co-operation than existing would also be required for the working of a national system of education. The provinces may be well advised to take over the educational powers from the local bodies, except where they are functioning very efficiently. To enlist local interest and co-operation Managing Bodies, School Boards and District Education Committees may be set up when sufficient people of the right type are available to serve on them. An Education Advisory Board may be set up in each province for the province as a whole. A strong Education Department may be set up at the Centre and the scope and functions of the Central Advisory Board should be enlarged. The present deterioration in the status and calibre of the educational administrative service should be checked and it should be enabled to secure the services of able officers who can ensure implementation of the national plan as visualised. Arrangements should be made for the exchange of officers between provinces and between the provinces and the centre. The Report also recommends the setting up of a senior educational administrative service on an All-India basis. The Director of Public Instruction in a Province should be responsible for all education in the State except university and higher technical education; he should also act as the Secretary of Education, where such a post is considered essential. Five per cent of the total gross expenditure in any branch of education has been added as the expenditure required for administering that branch of education.

The Table on the succeeding page (Report, p. 93) sums up the financial implications of the scheme, "based on pre-war standards both in regard to population and cost of living", and indicating the annual expenditure which will be reached when the scheme is in full operation.

These estimates do not include the cost of buildings which are proposed to be financed by loans. Secondly, the Report recommends that the expenditure be shared between the Centre and the Provinces, the basis of which should be settled before the plan starts. Thirdly, the first five years were to be spent in "planning, propaganda and training of teachers" and the actual plan implementation was to be divided into seven plans. Fourthly, the figures pertain to British India.

The importance of the Sargeant Report has already been underlined. Its main shortcoming is that in spite of professions to the contrary, the Report is not rooted in the Indian reality. We should have our own goals and adopt our own strategies in the light of our own resources and constraints. But that is a fault not only of this Report but of all our planning simply because we have no other model before us except that of the West. Our aspiration to "catch up with the developed countries" lands us in a very unenviable position,

(*Rs. in lakhs*)

Sl. No.	Branch of Education	Estimated gross annual expenditure	Estimated income from sources other than public funds	Estimated expenditure to be met from public funds
1.	Basic (Primary & Middle) Education	200,00	—	200,00
2.	Pre-Primary Education	3,20	—	3,20
3.	High School Education	79,00	29,00	50,00
4.	University Education	9,60	2,90	6,70
5.	Technical Commercial and Art Education	10,00	2,00	8,00
6.	Adult Education	3,00	—	3,00
7.	Training of Teachers	6,20	1,70	4,50
8.	School Medical Service*	—	—	—
9.	Education of the Handicapped*	—	—	—
10.	Recreation and Social Activities	1,00	—	1,00
11.	Employment Bureaus**	60	—	60
12.	Administration†	—	—	—
	Total	312,60	35,60	277,00

* An amount equal to 10 per cent of the gross expenditure at the appropriate stages has been provided to meet the cost of the School Medical Service and Education of the Handicapped.

** Special provision has been made for this services in the beginning; ultimately it should be absorbed in Administration.

† Provision to cover the cost of Administration has been included at all stages. It is assumed that this will approximate to 5 per cent of the gross expenditure.

and ensures our eternal backwardness in spite of all our foaming at the mouth. We face tremendous problems and we need to dig our feet very firmly in the ground and think originally on our own problems, survey our resources with unblinkered eyes, dig deep into our past for our inner sources of strength, and only after having established our identity and having developed criteria for establishing the relevance or otherwise of ideas floating around the world adopt or adapt foreign models to our own needs. As it is our acceptance of foreign ideas is as uncritical as our rejection is of our own. Within this over-all limitation of our intellectuals, the Report did a distinct service to the cause of education by drawing up a Plan—with all the limitations of available data—with time targets and financial tags. Every aspect of education has been dealt with through current strategies. The ideas of equality and justice to all, the emphasis on the need for efficient organisation and due preparation before launching the Plan are welcome features. The criticism against the Plan was internally inconsistent. On the one hand it was criticised for not being ambitious enough and 40 years set for the achievement of the goals was too long a period; on the other hand they criticised it for its heavy financial commitments, which were unrealistic in the context of Indian poverty. And yet they had no strategy to suggest by which the costs could be reduced without affecting efficiency. They pointed out to Russian and Chinese models without realising the difference of their social, economic and political setup. And yet they dismissed the essentials of the Gandhian strategy of self-reliance worked out in their own land as unrealistic. No wonder that in spite of all those criticisms the Sargeant Report continued to guide bureaucratic action, though without making much dent on the situation.

The plans which the Central and State Governments drew up followed the Sargeant Plan in a broad general way, but on a very much modest scale, depending upon resource availability. The emphasis on different schemes also varied from Province to Province according to local conditions.

IV

THE ON-GOING PROBLEMS OF THE ON-GOING SYSTEM

Elementary Education

Mass education was one of the first expectations from nationalist leaders and perhaps the most important need of approaching democracy. So universal, free and compulsory elementary (Primary and Middle) education and adult education claimed the immediate attention of the Congress Ministries. In the field of elementary education the problem was two fold: how to make it universal and how to relate it to our environment. The main hurdle was the financial constraint under Provincial Autonomy, made worse by the Congress commitment to Prohibition. Gandhiji solved all these problems through his system of Basic Education which he had been evolving over a long period of experimentation in South Africa and India. It caused an educational earthquake. His ideas and experiments in Basic Education and their subsequent extension are of such revolutionary import with such vast ramifications that they will be dealt with separately in a series of subsequent chapters.

There are, however, some other innovations which deserve mention here. The most important of these was the Vidya Mandir scheme. Its two important features were to increase the self-reliance of the school and the local community in close coordination and to provide technical expertise of the Development Departments to make this effort at self-reliance more efficient and productive. It was the first and perhaps the most important effort at inter-departmental coordination to put the school at the heart of the development process. The Agricultural Department would help the school to improve its productive capacity and the school in turn would become the demonstration centre for the village farmers. The Health Department would teach the school health and sanitation, first aid etc., and the school in turn would spread these ideas to the village. The Co-operative Department was to open a co-operative society in every Vidya Mandir village. And so on.

Every school-less village or a group of villages within a radius of a mile, having about 40 children of school-going age, would get a Vidya Mandir. Apart from the usual primary curriculum—usual but carefully related to the environment—it would include craft and agriculture. The school would further be linked with the local community through ties of service. It would be set up in the first instance as a voluntary venture and later transferred to the local community as a statutory obligation. It would be given a plot of land and equipment, which would enable it to earn a net profit of Rs. 200 per annum, under the control of the Agricultural Department, helped by the Panchayat's local committee of supervision, wherever a Panchayat existed. Other sources of income were: village charities on festive or other occasions, a share of the Dharamadaya collected by the village merchants, a portion of profits from village grain banks, profits from craft work as a part of the curriculum etc.—with some assistance from Government in times of difficulty. A Vidya Mandir was a single teacher school. The teacher was to be an especially trained middle-pass person. His service conditions were such as to ensure his contentment and continuance at one place—so necessary if he is to act as an agent of change in the village. His salary was paid out of the endowment fund and was to improve with its prosperity, thereby creating in the teacher an interest therein. The teacher was to live in the Vidya Mandir, act as the Secretary of the Committee or the Trust managing it, look after its properties, do social service and development work entrusted to him, organise out-of-school activities of the children, keep the village library and museum, and do such other work that might be entrusted to him. The school was to be a four year or seven year unit depending on the local situation.[8]

In 1938-39, 80 Vidya Mandirs started functioning. But the indifference of the care-taker Government which followed the resignation of the Congress Ministry in 1940 checked the further expansion of this very laudable scheme.

Another device to expand primary education at a comparatively low cost to the exchequer was to open voluntary schools under the mass literacy scheme of the Government of Bombay. Any person or association running a private school in a locality where there was a real need could get "a fairly liberal grant-in-aid of Rs. 4 per boy per year in average attendance". It was Rs. 6 in the case of girls and backward communities. There was also a small equipment grant. The scheme was started in 1938-39, evoking spontaneous public response and 2,400 voluntary schools sprang up during the year. Private enterprise added another over 3,200 primary schools, so that within a period of less than four years there was a network of small village schools all over the Province. On 31st March 1948, there were 8,049 aided Primary schools attended by 358,417 children as against 1,808 schools with 119,178 children five years ago".[9] With the resignation of the Congress Ministry, the scheme had a setback due to the period of "uncertainty, economic stress and clash of ideologies". With the return of the Congress Ministry the interest in the scheme again revived and as a result of extra concessions provided the number of Voluntary Schools under the mass literacy programme went up to the record figure of 8,707 with 4,53,159 children in 1948-49.[10]

Compulsion was another device used for accelerating the pace of expansion of primary education. The resultant situation by 1947-48 reveals the following features:[11]

(1) The age of starting compulsion varied from 5 years (Orissa) to 7 years in Bombay, depending upon the age at which primary education began in a particular Province.

(2) The period for which compulsion was enforced also varied from 1 year (age-group 7-8) in some areas in Bombay to 8 years (age-groups 6-14) in some areas in Madras.

(3) The approach was area-wise.

(4) The coverage varied very widely.

(5) In most of the provinces compulsion was not applied to girls in the villages. Even in towns and cities where compulsion was in force for girls—their number was very small. In the case of girls, both in the villages and towns, Bombay and Madras were exceptions.

(6) When compared with 1936-37 the progress of compulsion by 1946-47 was poor.

The total impact of these measures on the extension of elementary education was not very significant; and between 1936-37 and 1945-46 due to the difficult conditions created by the War and the political turmoil the number of pupils increased only marginally. It increased from 125 lakh in 1937-38 in the elementary stage to 161 lakh in 1946-47 in British India.[12] Even by 1950-51 it had increased only to 221 lakh,[13] representing only 32 per cent of children in the age group of 6-14.

Compulsion is considered the sovereign remedy for speeding up expansion. But the Indian experience is that while it might be useful to have legislation, it is impossible and prohibitively expensive to enforce it. More fruitful methods are: improving the economic condition of the people, regulating school hours and school vacations in relation to the working life of the children and the need of their parents for the labour of the children, mid-day meals, production centred education, and increasing the awareness of the public at large of the importance of education. It is only when the large majority of the children are joining schools on their own, that it is possible and necessary to enforce compulsion to bring in the hard core of the absentee children. Then also it would be useful to do it along with measures to tackle their social, economic and cultural problems. That the problem of bringing into school of non-attending children can be solved merely by compulsion is a simplistic view and self-defeating. Travancore, which has the highest rate of literacy, did not introduce compulsion till 1947. Baroda, where compulsory education was introduced as early as 1906, had still a low literacy rate (17.7% in 1941). Other factors operated in these cases and other factors are important.

Another problem of importance which emerged during this period was the question of the control of primary education by local bodies. The general tendency was to accept the Hartog Committee's recommendation to take away all powers from the local bodies. Bombay Government, however, vascillated between two extremes of no power to the local bodies and all powers to the local bodies—with pronounced tendency to favour the latter trend. Mysore, on the other hand, withdrew all powers from the local bodies.

The saddest and most tragic event of the period was that trade union methods entered the teaching profession. In 1936-37 the salaries in most of the provinces were extremely low. The situation was made worse by the hardships of the war. The scales recommended by the Sargeant Report further fanned the discontent. "The first great strike took place in 1946 in the Province of Bombay when 46,000 primary teachers struck work for 54 days."[14] Following this the scales of primary teachers were revised in all places but the price rise nullified most of their effect and the condition of the teachers at the beginning of the First Plan was pretty bad.

Secondary education

Secondary education during this period was characterised by retarded acceleration and increased drift. The slowing down of the expansion of primary education during 1927-37 under the impact of financial constraints, due to the world economic Depression, and the Hartog Committee's recommendations, emphasising consolidation rather than expansion, had its impact during the period under review, resulting in the slowing down of the expansion of secondary education. Other contributory factors were the war which adversely affected enrolment from middle class and poor families due to the rise in prices on the one hand and the increased cost of education on the other. Contribution from private sources also decreased due to the rise in prices and the feeling that now that national governments had come in, it was for them to look after education. This gains added significance from the fact that hitherto it was the private sector that was largely maintaining secondary education.

But the expansion, while it was slower than in the previous decade, was still considerable and aggravated the problems of drift already noticed in the previous decade and well-voiced by the Director of Public Instruction, Bengal:

> "There is the problem of waste, of misdirected effort, of a training that fits a boy for college and almost misfits him for everything else, that takes boys away from the normal and natural occupations of the country and leaves them

> hopeless and helpless at the end. The first question that the educationist must ask is 'what should and does it all lead to?' and this is the question which, in Bengal, is constantly shirked and to which, at any rate, no answer has yet been found. The existing system refuses to recognise that it has had its day and must cease to be, at any rate, as a general system for the whole province; there must be change or alternatives."

While the question of alternatives was being increasingly asked during the period under review, and some effective steps were taken to provide vocational and prevocational courses at the secondary stage, for the first time, and were prominently reflected in the Central and State Plans launched in 1947, considering the size and scale of the problem, it was like scratching the surface. The problem went on accumulating.

The other problems posed were to devise appropriate courses for girls and for students from rural areas. The problem of girls also raised wider issues of co-education, appointment and training of women teachers, etc. Rapid expansion also adversely affected standards and the chronic problem of large scale failures continued. It also accentuated the problem of the shortage of teachers made worse by the war. For many of them—quite a number of them already trained—hard pressed by their poor salaries, made worse by the rising cost of living, left the profession to take up more lucrative jobs created by the war. This was to some extent countered by the rapid increase in training facilities, especially for women. Those teachers who stuck on to their profession or were compelled to do so for want of an option had to strive hard to meet the rising cost of living by taking up supplementary work which adversely affected their attention to their duties. They also tended to adopt trade union methods to get their grievances redressed with ruinous effects on the morale of the profession and the general discipline in the schools. This was already at a low ebb due to the very nature of adolescence, the political turmoil, the hardships of their parents due to the high cost of living etc.

Even the structural form of secondary education was being challenged. Basic education, as Gandhiji conceived it and the

Hindustani Talimi Sangh was implementing it, was of seven years' duration and so threatened to take away the middle stage from secondary schools which would very considerably reduce their student population and erode their financial viability. On the other hand, the various committees and commissions dealing with university education had recommended the transference of one or two years of the Intermediate to the High Schools. So the problem of determining the duration and structure of secondary education was crying for an urgent solution.

One problem, however, had been solved. The hurdles in adopting Indian languages had been removed. Good quality text books had been published. Equivalents of scientific terms had been evolved, though they were yet to be polished and made uniform throughout India. The teachers were gaining confidence in their ability to teach through the mother-tongue. The problem of English in the new set up, however, remained to be considered and decided upon.

The hitherto settled question of the management of secondary education, however, got unsettled during this period. Ever since the Indian Education Commission of 1882, official policy had been to leave the management of secondary education in the hands of private bodies. And so private enterprise controlled secondary education almost completely. But the economic strains of the war, the drying up of private charity, the increasing dissatisfaction among the teachers, the indiscipline among the students, and the consequent increased official surveillance made the position of private managements very difficult. On the other hand, the government felt that as they were forced to meet increasing deficits with very little powers, they should rather take over the schools—a step almost universally supported by the staff, students and parents, though each for their own reasons. For financial reasons, however, immediate nationalisation was not possible. But the cry for nationalisation was very loud when planned development began in 1951.

So the whole question of secondary education was riddled with problems. No wonder the First Plan called secondary education as "the weakest link of the chain". And the

Secondary Education Commission when it was appointed was long overdue.

University education

The general awakening due to the political triumph, symbolised by the coming in of Congress Ministers, the Quit India movement, and, finally, the attainment of Independence and the spurt it gave to popular aspirations, increased the desire for higher education, especially among women, students from rural areas and weaker sections. Increased urbanisation due to the war also had the same effect. The war and the increased industrialisation, during and after the war, also pushed up the demand for educated, especially scientifically and technically trained, manpower and led government to give generous grants to university education. The rapid expansion of secondary education in the earlier decades also increased the pressure for expansion of university education, especially when it fitted the students mostly for university education. The national leaders, especially after Independence, concerned with the pressing task of national reconstruction looked to the universities for giving them the top leadership in the various walks of national life. Pandit Nehru declared that if all was well with our universities, all would be well with the Nation. It is significant that immediately after Independence the National Government set up the University Education Commission in 1948. Universities also got considerable support from the business community who had made lot of profits during the war. It is indicative of the prestige value of the universities that while private contribution to education as a whole contracted the universities attracted increased assistance.

For all these reasons university education expanded very rapidly during this period. New colleges were opened, new faculties started. The enrolment and activities in existing colleges and universities considerably increased. The enrolment in universities increased from 126,228 (including figures of universities now in Pakistan) in 1936-37 to 241,794 in 1946-47 (for universities now in the Indian Union). This figure rose to 4,20,000[15] in 1950-51. Except Travancore, the chief reason for their coming into being was not academic but one of prestige —to establish a university in the Province even whithout sufficient resource availability. The need for a coordinating and over-all national body to ensure that ill-equipped universities, without sufficient academic justification, did not come up was quite apparent even at this stage; and the Sargeant Report's recommendation to set up a University Grants Committee was very timely. In regard to the Utkal University the University Education Commission says, "The University has no teaching departments and has been exercising only affiliating powers up till now. The establishment of the university has not therefore affected the institutional life of the province in any significant way and one does not know if the colleges are better supervised today than they were under the Patna and the Andhra Universities. . . . Its main function has been university examinations and to recognise institutions which are eligible to send up candidates for these examinations".[16] For Saugor it comments as follows:

"1. Saugor does not have the traditions of higher education that Nagpur and Jubblepore have;
2. The financial position of the university has not enabled it to appoint eminent teachers and thereby attract students from other centres;
3. The university has no proper buildings either for teaching or for residence. What it has are mostly impoverished barracks. The library and laboratory facilities are not what they should be in a teaching university, the former possessing only about 12,000 books and the latter lacking some of the essential equipment."[17]

Rajputana, however, had started only in 1947. It was too early to make any fruitful comment an it except that it started by affiliating the existing institutions and made plans to start teaching at an early date. The proposal to set up the Travancore University had a long gestation period and the university was much better planned than the other universities. The Act defines the aims of the university as follows:

"1. to effect a reorganisation of the system of education in

> the state with a view to the gradual development of technical and technological education;
>
> 2. to make greater and more systematic provision for the furtherance of original research in the various branches of Applied Science; and
> 3. to provide for the conservation and promotion of Kerala Art and Culture."[18]

It had thus a dual justification: the promotion of education in science and technology and the conservation and development of regional culture. For the former purpose it set up an Institute of Textile Technology, a College of Engineering, a Central Research Institute devoting itself to research in Applied Science, particularly in the subjects which have a special bearing on the agricultural and industrial conditions of the State, and a School of Arts. It has further an Oriental Manuscript Library and a Publications Department intended to enrich Malayalam and Tamil literatures.

An important function of a university is research and the quantity and quality of research is an indicator of the health or otherwise of the university system in a period. Before 1914, when Sir Asutosh Mukherjee founded the first post-graduate departments and put post-graduate training and research on a sound footing at the Calcutta University, most of the research work in Sciences and Medicine was done in government Research Institutions and a few individual scholars in isolated colleges conducted research on their own lines, sometimes with admirable results, without any organised attempt to train students in methods of research or to develop Schools of Research at any university. Thereafter there was slow but steady progress and many professors won even international recognition. The best period of research, however, started after 1920. "It may rightly be said that both in quality and quantity the level of scientific research was at its best in Indian universities between the year 1920-1945. While before 1920 scientific research was mainly a monopoly of the scientific services, after 1920 the leadership in fundamental research in most of the sciences passed over largely to the universities. All this research activity was due to the hard work and enthusiasm of a few university professors, who had to work with meagre grants, insufficient equipment and inadequate library facilities. There were practically no grants from the Central Government for fundamental research, although grants were given to a few university teachers by the Indian Council of Agricultural Research and by the Indian Research Fund Association for medical research. Considering the handicaps under which these research workers in the universities have laboured, their record cannot but be called creditable." But in spite of this "substantial progress", continues the Commission, "the quantity of qualitative research turned out by our universities is not what it should be in a country of India's size. The information gathered by the Scientific Manpower Committee reveals that the number of Ph.D. and D. Sc. degrees in six Basic Sciences, awarded by all the universities of India, during the last ten years, comes to only 260, an average of only 26 per year, which is by no means a good record. By contrast, in England, at Cambridge alone in 1935, more than 400 men were engaged in scientific research". Further, unfortunately "There are signs of a steady decline in the quality and quantity of research at our universities" due to the inability of universities to compete with Government to attract talent and hold it as well as due to the fact that due to the war and the consequent price rise the universities have not been able to get adequate apparatus and equipment, especially as their equipment grants in most cases had remained stationary.

The commission also commented on research in education. "There is not much systematic research in Education going on in India today." While realising the value of M.Ed. and the preliminary training it gave in original work, the Commission recommended that after their B.T. the students should teach for some years before coming back for the M.Ed. For otherwise, straight from the B.T. their possibility of doing any original work was remote. In regard to the valuable work being done by some lecturers and professors, the Commission felt that it needed to be coordinated and planned on an inter-university basis. For the "problems confronting Indian education today are so stupendous in their sheer scale, and so complicated in their nature, that the efforts even of the most gifted and persistent individual seem dwarfed in comparison".

This task of coordination, the Commission felt, could best be done by the Central Institute of Education. The two most urgent research problems requiring such coordinated effort, identified by the Commission, were the imparting of universal literacy and the devising of tests of selection "based upon capacity and temperament alone" "for use on a nation-wide scale and flexible enough to be fair as between different social strata and different physical environments". The former is necessary to ensure the success of democracy on the basis of adult franchise. The latter is essential if people are to go up the education pyramid on the basis of equality and justice. It was a stupendous task and yet even a beginning had not been made in that direction. "No task", concluded the Commission, "in front of India seems to us more urgent than this".[19]

Some defects of university education, which became very prominent as time passed, were already evident. These were:

(1) While the total enrolment at the university stage was not excessive when compared with the vast population of the country, it was disproportionately large compared to the base of primary and secondary education.

(2) It was also large compared to the need of the country for the type of students it turned out. It was partly due to the preponderance of art courses at the universities. Not only did universities produce unmarketable products, they created in them a distaste for available jobs and occupations, resulting in an imbalance between demand and supply of educated persons.

(3) The War and Post-war Development experienced serious shortage of scientific and technical manpower. The Scientific Manpower Committee found that against the estimated demand of 12,340 M.Sc.s and Ph.D.s in Science in the next five years for Government and Government sponsored activities (excluding those of industry but including science teachers) alone, the supply by our universities during the same period would be only 4,799. This gap would widen further if the needs of industry are also taken into account. This

gap, said the University Education Commission, could only be filled "if the existing facilities for post-graduate training and research at the universities are greatly extended and new department of research are added to those universities where they do not exist at present".[20] This deficiency had been noted as early as 1902. The needs of the War and Post-war industrial development made their shortage very acute indeed.

(4) The First Five Year Plan pointed out to the extremely difficult financial position of the universities. The immediate difficulty that had to be faced in the reform of university education was that of finance. "The financial position of most of the universities has worsened in recent years on account of the large increase in expenditure. A very large number of universities are running on deficit budgets and hardly any university has the funds for necessary development."[21] To meet the situation the Commission recommended the setting up of a University Grants Commission in place of the University Grants Committee that had already been set up—following the recommendations of the Sargeant Committee—to determine State assistance to the State universities, prevent new universities coming up without adequate financial provision and to coordinate the activities of the various universities to prevent wasteful duplication. In turn the universities were asked not to allow the opening of new colleges without adequate finances.

(5) The over-crowding in colleges was also noted by the Commission and they recommended to counter it by making secondary education purposeful and complete by itself, leading to early diversion of students to profitable employment; and, secondly, by introducing the principle of selective admissions. The delinking of degrees from jobs was also recommended to take away the motivation for running to the college.

(6) There was also considerable room for better utilisation of existing resources not only by affecting economies in expenditure but also by improving return from

existing expenditure, and the Commission made recommendations for improving teaching.

(7) The specific needs of the rural areas were not being met. The universities and colleges as a matter of fact acted as a great eroding force by taking away their best brains from them through a continuing brain drain. A new type of university was required for developing instead of draining the rural areas. The recommendation of the University Education Commission for setting up the Rural University was included in the Plan. "The Central Government should help to eastablish, during the period of the Plan, as least one such university."

VOCATIONAL AND PROFESSIONAL EDUCATION

The need for vocationalisation of secondary education was increasingly felt in the period 1921-37 in the face of rapid expansion of secondary education and its increasing pressure on university education, with the products of both secondary and university education unprepared for the varied available employment opportunities—"unemployed because unemployable". At the very start of the next decade, 1937-47, at the request of the Government of India, the Board of Education in England deputed two reputed experts—Messrs A. Abbott and S.H. Wood to visit India and advise the Government of India on vocational education. The best of their recommendations were absorbed in the Sargeant Report, the recommendations of which in this regard have already been given. As a result of the stimulus provided by the Abbott-Wood Report and, subsequently, by the Sargeant Report, as well as by the needs thrown up by the War, the industrialisation it promoted, and the post-war industrial development plans, vocational education expanded considerably during this period. The plans of rehabilitation of demobilised soldiers also led to the expansion of training facilities at this level. By 1946-47, there were 490 Engineering, Technical and Industrial schools with an enrolment of 27,940.[22] The problems of these institutions at the end of the period were summed up in the First Five Year Plan as follows:

"Facilities provided through the technical and industrial schools, the training centres of the Ministry of Labour and the apprenticeship and training arrangements in industrial undertakings have remained by and large uncoordinated. The All-India Survey which is being conducted by the Director-General, Resettlement and Employment, should help to bring about the necessary coordination. Proper tests and standards should also be laid down. In any such training scheme the problem of the unemployed worker should receive special consideration. This will chiefly be in the form of adequate provision of retraining facilities with due regard to the prospects of future employment and the establishment of vocational guidance and employment counselling services."[23]

At the university stage, a good deal of progress was made in the expansion of engineering and technological education. Against 6 engineering colleges (excluding 2 which went to Pakistan), in 1936-37 there were 17 in 1946-47 with an intake of nearly 2,500[24] per year. The intake rose to 5,093 in 1951. At the Diploma level the intake increased from 3,650 in 1947 to 6,438 in 1951.[25] In spite of the rapid increase the output was still far short of what it was in other developed countries and even in comparison to her own needs. Secondly, as the First Five Year Plan noted, "Almost all the above development has (had) taken place in the basic courses and specialised courses have (had) not received due attention".[26] Thirdly, the Plan pointed out the need for consolidation as expansion had not always been accompanied by adequate facilities.[27] The need for specialised courses had, however, been realised and as early as 1945, the Higher Technological Committee was set up under the chairmanship of N.R. Sarkar to advise Government as to the manner in which higher technological education should be organised in India. The Committee recommended (1946) the setting up of 4 institutes of higher technological education—one in the East, one in the West, one in the North and one in the South. Provision was made in the First Plan itself to set up the eastern and the western Indian Institute of Technology.

The setting up of the All-India Council of Technical Education in 1945 was itself an event of great importance for the planning, development and coordinating of technical education in the country. The subject of training the country's technical manpower is of such fundamental importance that developments therein will be dealt with subsequently in a separate chapter.

In agricultural education also the period saw considerable development. In 1936-37 there were 6 graduate or post-graduate level institutions—one of these later went to Pakistan—with an intake of 1,008.[28] In 1947 there were 17 institutions with an intake of 1,551.[29] By 1951,[30] their number increased to 22, with an out-turn of 1000. There were 38 schools, which trained village level workers for extension services. While this marks considerable progress over the period, the picture by the end of the period was still extremely unsatisfactory not only compared to other developed countries like the USA but even when considering India's own needs in view of her size and predominantly agricultural character. As the University Education Commission pointed out:

"With only about 1,500 students being admitted to all agricultural colleges each year, in case half of them graduate, this would represent only three agricultural graduates per year per million of the farming population.

"We are informed by heads of agricultural schools that of those who do graduate, not more than two or three per cent return to agricultural communities. In 1936 and 1937, Sir John Russell, Director of the great Rothamsted Experimental Station of England visited India at the request of the Imperial Council of Agricultural Research, to review the condition of Indian agriculture. After an extended tour of agricultural stations and villages he reported that, in general, the men who actually till the soil are scarcely touched by the national programme of agricultural education."[31]

Another aspect of education at schools and colleges was its theoretical character and lack of relating theory and practice, with the inevitable adverse effect on extension services, which have to demonstrate new practices rather than talk about them.[32] The Planning Commission recommended that all schools should be converted to the Manjri type schools of Bombay State with their practice of the "dirty hands" method. The ICAR suggested that the college course "should include supervised intensive practical training under rural conditions for a period of two months every year".

In regard to agricultural research, it was pointed out by the Planning Commission that no significant work was being done in the universities to the great disadvantage of agriculture—because the universities were eminently suited to such research, especially of the fundamental type—as well as of the universities whose scientists thereby missed the opportunity of coming into direct contact with real problems.[33] "It is a striking fact, for example, that there is not a single chair of genetics in any Indian university, although breeding of plants and animals which rests on the foundation of this science, has been in progress, for several decades."[34] The University Education Commission also pointed out the poor quantitative dimensions of post-graduate education and research: "The number of M.Sc.s and doctorates turned out from the agricultural colleges in India during 1946-47 was 74. Also 156 candidates received post-graduate diplomas in agriculture, veterinary, forests, dairying and allied sciences in the same year. According to the Report of the Scientific Manpower Committee in 1948, it is estimated that the facilities for training in post-graduate research work in agricultural sciences are available in India for only 166 students. There are at present no facilities worth the name for training in soil survey or soil conservation. . .".[35]

Most of the research in agriculture—and this work was considerable in certain directions—was done outside the universities under Commodity Committees and Central Research Institutes as well as in Research Institutes attached to the Departments of Agriculture of the various State Governments. There was, however, very little coordination of this effort. The All India Council for Agricultural Research, established in 1930 for "promoting, guiding and coordinating research work", had no control over the research programmes of the various organisations conducting research except in schemes where it shared in the cost with State Governments. The second defect pointed out was the crop-wise compartmentalisation of research. Thirdly, there was the absence of research and experimental stations located in each crop-soil region, where problems as they arose were tackled on a continuing basis and solutions became available to feed the extension services which might otherwise "soon come to a standstill". The dearth of an effective extension service was another major deficiency, which rendered much of the research work infructuous. The Planning Commission's Report on the First Five Year Plan says: "In the course of research work a vast amount of valuable information has been obtained and striking results have been achieved particularly in the field of plant breeding, utilisation of manures and fertilisers and plant protection. The use of improved varieties of seed, pre-sowing treatment of seed, preparation and utilisation of compost manures, utilization of fertilizers, etc., are some of the results of research which have come to form a part of an enlightened cultivator's agricultural practice. But the lack of a properly trained extension service has retarded this process. The recommendation of the GMF Enquiry Committee is that such a service should be available throughout the country within a period of ten years, and a beginning is being made in connection with the Community Projects. An extension service helps to connect the research centre with the farmer in the field—his problems being brought to the research centre and new discoveries being carried to him. The absence of such a service has had its effect on research work also, in that the demands on research workers were not sufficiently insistent or pressing and tended to be unrelated to the practical needs of the cultivator".[36] Lastly, the security of tenure for research workers was missing and adversely affected their single-minded devotion to their work.

As regards medical education there were no very significant developments during the period under review. The system came for critical review at the time of the University Education Commission in 1948-49 and later at the time of the formulation of the First Five Year Plan in 1951.

Quantitatively, in 1946-47 there were 26 medical and veterinary colleges with an enrolment of 8,856. Facilities varied considerably in the various provinces. By 1951 there were 30 medical colleges preparing students for the MBBS with an intake of 2,500 students and an output of nearly 1,600 graduates. In addition, there were 4 medical schools turning out licentiates. For nursing education of the university standard there were 2 colleges—Delhi and Vellore. Facilities for this education and training were also available at the All-India Institute of Hygiene and Public Health. There were also facilities for the training of public health engineers, health visitors, sanitary inspectors etc.

A number of problems had already surfaced by the end of the period under review. Firstly, there was the quantitative aspect. The organisation of health services, which were very meagre at that time, would require a very much larger trained personnel of various levels of qualifications and competence. Secondly, there was very little of the study of problems of rural health and medical care in the universities. The practitioners also did not go to the rural areas. Thirdly, the standard of facilities provided was poor and needed considerable upgradation. The colleges needed more teachers. The scheme of education did not have compulsory internship which was essential for giving the graduates the necessary practical experience. There was not enough emphasis on the preventive and social aspects of medicine. Fourthly, while there was considerable progress in post-graduate education in the universities during this period, both its quantity and standards left much to be desired at the end thereof. Need was being felt of an All-India Institute for upgrading standards of post-graduate education, as well as upgrading existing departments. For keeping a watch on standards and coordinating facilities provided or to be provided the Government of India had set up the All-India Council of Medical Education. Fifthly, there was the problem of training of large numbers of nurses, midwives, public health workers etc. To meet the large numbers required within a short period, short-term courses had to be devised, to train auxiliary personnel to widen the effective area of operation of the fully trained personnel. Sixthly, the Indian Ministers were giving much greater attention to the indigenous systems of medicine, homeopathy and nature cure. The upgradation of the training facilities and strengthening of research in these systems had become a "very live issue". So had the question of establishing appropriate relationship among the various systems. Their relative value had to be established in terms of efficiency, cost and serviceability in the Indian environment of the mass of the people. The indigenous systems had centuries of experience behind them. They were cheap. They treated the disease in the context of the whole man and his natural and social environment. They, however, needed to adopt many new methods and a scientific outlook. There needed to be much greater contact between the various systems. We should also fully exploit our medicinal herbal wealth and set up appropriate industries, strongly supported by research.

One may make only a brief mention of legal, commercial and art education. For nothing very much happened in these branches of study. So far as legal education was concerned there were 23 colleges in 1946-47 with an enrolment of 5,332 students. All these colleges admitted students after graduation except in Bombay and Andhra, where during this period under review a change was introduced, admitting students to the law courses after the Intermediate. The course was of two years except in Calcutta and Dacca where it was of three years. Most of the universities had part-time classes, though there was a tendency to make the course full-time. While all the universities had instituted Post-Graduate degrees, no special arrangements had been made in most of the colleges for teaching post-graduate students. The whole position of legal education was reviewed by the Legal Education Committee appointed by the Government of Bombay towards the close of the period under review.

Commenting on the position of Commercial Education, the University Education Commission said that starting with the establishment of the Sydenham College of Commerce and Economics in 1914, Commerce education spread in other universities and by 1948, every Indian University had either a Faculty or a Department of Commerce. In most of the universities commerce education starts in the Intermediate itself, and is followed by a two-years degree course, as in most of the universities, or a three-year Honours' course in Delhi and

Andhra. "Other universities, like Bombay, Allahabad, Lucknow and Agra have a Master's Degree in Commerce."[37]

In regard to Art education there were 14 Art Schools with 1,698 students in 1946-47.

V

SOME SIGNIFICANT INITIATIVES

Adult Education

As a sine qua non for the successful introduction of compulsory and universal education and as an essential component of mass education so necessary for running a democracy on adult franchise, adult education received the immediate attention of Congress Ministries. Dr. Syed Mahmood, the Education Minister of Bihar, approvingly quoted Lenin who had said: "The liquidation of illiteracy is not a political problem; it is a condition without which it is impossible to speak of politics. An illiterate man is outside of politics, and before he can be brought in, he must first of all be taught the alphabet. Without this there can be no politics, only rumours, gossips, tales, superstitions". In 1937 itself, all the Congress provinces and many States launched literacy campaigns with or even without government assistance. These campaigns involved almost everybody—officials, students and teachers, voluntary organisations etc., and generated tremendous enthusiasm. India seemed to be on the threshold of a social revolution. Pressure and inducement were used in places to make industrial workers and government employees literate. In Bihar, for example, Government organised literacy classes. The policemen were asked to become literate within six months or lose their jobs. And so on. Only literate persons were to be appointed in Class IV jobs, and illiterate persons in position were asked to become literate within a definite period if they wanted to hold on to their jobs. Industrialists also organised classes for their workers. School children worked to make their families literate. Prisoners in jails were given literacy training—many of them up to the primary standard. Literacy classes of three (Bihar) or four (Bombay) months were very often followed by a six months' course of follow-up, so that the adult did not lapse back into illiteracy. A large number of books were published for neo-literates. Village libraries were set up. The content of these books related to activities—like health, agriculture, co-operation etc.—in which the adults were interested. Everyday arithmatic was also taught. In Bombay there were specific institutions to coordinate adult education work with rural reconstruction.

Before, however, the results could be consolidated, the Congress Ministries resigned and, though the movement did not die out under the care-taker Governments, the life out of it was gone, and did not revive till the Congress Ministries came back to power in 1946, followed by Independence on 15 August 1947, when the second phase of adult education work began. The lessons of the first phase, which had their impact on planning for the second phase, may be summed up as follows:

(1) The problem was so vast that the scale on which literacy campaigns were organised, though much bigger than attempted at any time before, they could not make much dent on the problem. For example, while the Bihar campaign was "the most impressive Government campaign conducted in India in modern times",[38] yet its utter inadequacy to solve her illiteracy problem was underlined by Dr. Laubach:

> "A study of Bihar's statistics reveals the enormous difficulty of making India literate. If Bihar continues to teach 5 lakhs a year, it will take her fifty years to make those literate who are living today. But meanwhile in fifty years the population will have increased fifteen millions. Besides this, two-thirds of the adults now living will be dead and a new batch of illiterates will need to be taught. So we must face a sobering fact. Bihar has far and away the finest record in India, but it is not enough even to hold her own".

(2) Apart from the quantitative puzzle, it was increasingly realised that while literacy campaigns were good in stirring the stagnant waters, frothy enthusiasm was not

enough to achieve tangible results, which required very sustained follow-up. It needed strong adult motivation, appropriate methods of teaching and above all very relevant reading material. The gain of this period was primarily to initiate us into the complexities of adult education, which occupied the minds of government and other adult educators in the second phase.

(3) Concentration on literacy was counter-productive. From the very beginning literacy should be woven round life activities of the adult to make him more efficient. This concept was there from the very beginning but in actual practice the attention was rivetted only on literacy. As the Chairman of the Adult Education Committee of the Central Advisory Board of Education, Dr. Sayed Mahmood, had said in 1938:

> "... the objectives of this movement should be (1) to teach the illiterate adult the three R's, and (2) to impart knowledge closely correlated to his working life and give him a grounding in citizenship. These two aspects are closely inter-connected as mere literacy without the broader aspects of adult education would not equip him to lead a better and fuller life and no sound adult education is feasible without a minimum of literacy. It is essential that these two processes should be carried on simultaneously as to a large extent they are complementary to one another."[39]

This comprehensive concept of Adult Education was emphasised by the Saxena Committee (1948) and was indicated by re-naming audlt education as Social Education. By the time The First Five Year Plan was formulated the concept was well-established:

> "The concept of adult education, which was mostly confined to literacy, was found to be too narrow to be able to meet the various needs of the adults. It was, therefore, widened to include, in addition to literacy, the health, recreation and

home life of the adults, their economic life and citizenship training; and to denote the new concept the term 'social education' was coined. Social education implies an all-comprehensive programme of community uplift through community action. External aid may be there but only to stimulate, and not to replace, community effort. The importance of such a programme is obvious. It should not only make our limited resources much more effective but also build up a self-reliant nation. In a country, where 80 per cent of the population are illiterate democracy will not take root until a progressive programme of primary education trains up a generation to undertake its responsibilities. Even the programme of primary education is considerably handicapped without a corresponding programme of the education of the adults."[40]

This comprehensive concept had earlier been emphasised by the Mysore Seminar on Adult Education in 1949-50, jointly organised by UNESCO and the Government of India. Gandhiji had also been emphasising this concept since 1945 and was experimenting with it at Sewagram, Noakhali etc. These experiments even today remain the most effective steps taken so far for adult education. They are so important that they will be dealt with separately in a subsequent chapter.

(4) Some other interesting experiments during the period under review may be mentioned:

(*i*) The Bombay City Adult Education Committee. The first literacy campaign in the City was so successful that the Government decided to put the programme on a permanent footing. For the purpose the Government set up the Bombay City Adult Education Committee and not only gave it a grant of Rs. 50,000 a year but also a special literacy officer to supervise the day to day work. The Committee has been doing excellent work since then. They carry on literacy and post-literacy work, bring out a fortnightly paper for the neo-literates. They have also brought out some text-books for literacy classes and other reading material. The work is carried on with the co-operation of the Government of Bombay, the Bombay Municipality, the Bombay Port Trust and the public. Each contributes financially also. The work of the Committee is continuing even today and is a model for cities and other urban concentrations of population.

(*ii*) The scheme of Compact Areas for Adult illiteracy. As the scheme of removal of adult illiteracy in the rural areas did not make much progress the Bombay Government in 1945 took up the recommendation of the Manshardt Committee to use the compact areas of 40-50 villages as a unit of programming. This strategy makes the work much more economical and efficient. Supervision becomes much easier.

(*iii*) The Mysore State Adult Education Council is an excellent model of what a voluntary agency can do, with Government assistance on a State-wide basis. It has a State-wide organisation and conducts literacy and post-literacy classes and organises rural libraries. It has a huge publishing programme. The number of adults made literate rose from 2,253 in 1941-42 (the Council was founded in 1941) to 78,611 in 1946-47. Book clubs are formed for post-literacy work. Each student is given a set of books—each set containing books written in simple Kannada on various subjects of interest to the adults. Village libraries came up in villages where the Panchayats make a contribution. It is matched by more than double the amount by the Council. At the end of June, 1948 there were 1,812 such libraries all over the State. "The Mysore State Adult Education Council", said its Chief Executive Officer, "is one of the largest publishers of Kannada books in the whole of Karnataka." It publishes literacy text-books, small brochures on various subjects of adult interest, "Balku" weekly and Pustaka Prapancha (monthly).

(*iv*) Its most significant venture has been the starting of a Vidyapeeth, on the model of Danish Folk Schools. It is a residential institution where students from rural areas are admitted and given, besides liberal education, theoretical and practical training in agriculture and cottage industries. In 1947 it was the only institution of its kind in India. Later, towards the end of the period under review, other institutions after its pattern came up.

Weaker Sections: Scheduled Castes, Scheduled Tribes and other Backward Classes and Women

The Congress got its first opportunity to do justice to the weaker sections when it assumed power in 1937. Harijan uplift was a top priority. Various provincial governments passed legislation to remove their social disabilities—e.g. the Harijan Temple Entry Act, 1947, The Removal of Civil Disabilities Act (Madras Act No. XXI of 1938), The Malabar Temple Entry Act (Madras Act No. XX of 1938), The Temple Entry Authorisation and Indemnity Act (Madras Act No. XXII of 1939) etc. These forbiddings of the practice of untouchability were enshrined in the Constitution. According to Article 17 of Part III of the Constitution "untouchability is abolished and its practice in any form is forbidden". Reservations were given in elected bodies, services etc. Age concessions were given for entry into government service. Special educational facilities were all of a piece with this over-all strategy of Harijan uplift.

The various educational measures adopted were: freeships and scholarships on a liberal scale, common hostels and boarding and lodging charges, liberal grants to voluntary bodies running Harijan hostels, reservation of seats in technical and professional institutions etc. These facilities were available at all stages of education. Those institutions that discriminated against the Harijans were penalised. This movement also received a fillip from Dr. Ambedkar and the new Harijan leadership. The resignation of the Congress Ministers in 1940 slowed down this programme, which was taken up with gusto when they returned in 1946. But so much how to be done in the field to give a fair deal to the Harijans that even by 1951, we could only say that a beginning had been made.

Similar progress was made in regard to children of the Scheduled Tribes and other backward classes.

The most substantial weaker section of the population was women. The employment opportunities thrown up by the war and the economic pressure caused by the consequent price rise led to an increase in the number of employed girls and women and an increased demand for girls' education. This combined with the special position Gandhiji and the Congress under his guidance gave to women led to special efforts being made to promote girls' education. The task, however, was herculean and even by 1950-51, when the First Plan was launched, the position even at the elementary stage was still unsatisfactory as the following figures will show:

Stage	Number of pupils as percentage of number of children in corresponding age groups		
	1950-51		
	Boys	Girls	Total
1. Primary (6-11)	59	25	42
2. Middle (11-14)	22	5	14
3. Elementary (6-14)	46	17	32

Source: Second Five Year Plan, Government of India, Planning Commission, 1956, p. 503.

The position at higher levels was much worse. The question of content for women's education had received hardly any attention, except in Basic Schools.

Muslim education

While the educational backwardness of the Muslims had largely disappeared by 1937, their separatist mentality, which was at white heat between 1937-47, and its impact on the problems of education deserve to be mentioned. This tendency is reflected in the report of the Special Committee appointed by the All India Muslim Education Conference. Everywhere there was to be reservation for Muslims—in teachers, in High Schools and universities, in technical institutions etc. Muslims should be taught in separate schools. There should be a separate curriculum for Muslim elementary schools. Education should be administered by individual autonomous units and there should be no strong Central Education Department. Religion was to be made the basis of education. Denominational schools should continue and be recognised. Basic education was not to be enforced in the case of Muslims. The document was so sectarian that even what could have been considered as a legitimate aspiration for cultural identity, as the recommendation that the medium of instruction should be Urdu, was bound to be misunderstood.

VI

THE CONSTITUTIONAL AND ADMINISTRATIVE INFRASTRUCTURE

The 1935 Act marked a distinct advance over the 1919 Act in that all the Provincial Departments were theoretically transferred to popular Ministers, responsible to the legislature with an overwhelming majority of elected members. In education, it ended the division of educational subjects into "partly All-India, partly reserved, partly transferred with limitations, and partly transferred without limitations". Even the watchful eye that was to be kept to protect the interests of the Anglo-Indian and European communities in education was never called into play as the Congress Ministries falsified all fears in this regard. The financial constraints, however, continued as already mentioned in Chapter I. The IES cadre had been mostly liquidated and very few European officers remained. The relations between the bureaucracy and popular Ministers were singularly smooth.

The Congress Ministries resigned in 1940 and a period of standstill, or in some respects retrogression, followed till the threads were again taken up by the Congress Ministries on return to power in 1946 in the Provinces, the Interim Government in 1946 and finally, under Independence in 1947. During the Interim Government the Education Department at the Centre came into the hands of an Indian. It was formed into a Ministry after Independence and Maulana Azad became the first Union Education Minister.

Due to the wise leadership of John Sargeant, the Central Advisory Board continued to work on a progressive system of education and the administrative requirement of its establishment and maintenance in the light of the recommendations it had already made.

By the end of the period under review the State Governments had become primarily responsible for education except university and technical. The Central role of coordination was also well established and was exercised through the Central Advisory Board of Education, the University Grants Committee and the All-India Council of Technical Education. The principle of Central Assistance to mount certain programmes of national importance and to remove regional imbalances was well-recognised. The Central Government was also to run all-India Institutes/Departments like the Departments of Archives, Anthropology, Archaeology, National Library at Calcutta, the Indian Museum, Calcutta, the Central Institute of Education etc. It also deals with other countries and international organisations in the matter of education, science and culture. It gave Post-Matric scholarships to weaker sections and Overseas Scholarship for very advanced study abroad. Preservation of National Culture again was the Centre's special responsibility. The Centre was also to discharge its clearing house functions through its Central Bureau of Education. It was also to give grants to All-India private organisations.

The Central Advisory Services had been set up for the Ministry of Education. Appropriate scales had been suggested for the States to attract properly qualified and talented persons for the Education Departments. While an All-India education service was not considered practicable, interchange of State and Central Officers was strongly recommended by the CABE.

So even by the side of the earth-shaking events of the period, described in Chapter I, the educational scenario, as presented in Chapter II, was by no means a tame affair—a mere onward march of routine events. Firstly, because the political and constitutional struggle under Gandhiji's leadership had a non-formal educational dimension of gigantic scale and global significance. Secondly, Gandhiji's prophetic vision of a non-violent global society, of which the present struggle was only the first phase, led him to present to the country the blue print of an educational system which would ultimately usher in that order. This caused an educational earthquake. Thirdly, the sheer logic of events forced the British to slowly, painfully but surely change their policy of industrialisation of the country and preparing the scientific and technical manpower therefor. Fourthly, at the earliest opportunity after Independence, the country appointed the University Education Commission to reform our universities, which our leaders thought, could become our major source of strength. It were these four factors which made this period educationally also so significant. The first factor has already been dealt with in detail. The other three will be dealt with in Part II—the Highlights—that follows.

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PART II

The Highlights I

(THE GANDHIAN MODEL)

THREE

HIS PHILOSOPHY OF LIFE

I

THE CENTRAL CONTENT

Gandhiji was one of the most idealistic and also one of the most pragmatic of men. The Central Content of his life was Truth, God, Love or Non-Violence. He used these as interchangeable terms for the Supreme Being, the cause of causes, the origin of all things—"God that is Truth and Truth which is God". At another place he says: "This society (non-exploitative society) must naturally be based on truth and non-violence which, in my opinion, are not possible without a living belief in God, meaning a Self-existent, All-Knowing Living Force which inheres every other force known to the world and which depends on none and which will live when all other forces may conceivably perish or cease to act. I am unable to account for my life without belief in this All-embracing Living Force".[1] It was his attempt to order the smallest detail of his life in accordance with the behests of Truth. Absolute Truth is, however, not possible for finite man to know. It is only relative truth that man can realise. As the situation changes so does the application of the central principle change. That explains the apparent inconsistencies in this most consistent of men. And he made no fetish of consistency for consistency's sake. As a matter of fact he said: "Forget what I said yesterday. Remember what I say today. Thus we shall grow. Only a hypocrite cares for consistency for its own sake".

If one's perception of Truth was not to be merely an expression of one's erratic desires one had to discipline one's mind to make it a sensitive instrument of that perception, to make it as correct as it is given to finite man to make it. The ideal for that discipline was repeated in Gandhiji's prayers, both morning and evening, in the form of the following eleven vows:

> "Ahimsa (non-violence), Satya (truth), Astaya (non-stealing), Brahmcharya (chastity), Asangraha (non-possession), Sharira Shram (body-labour), Aswada (control of the palate), Sarvatra Bhaya Varjana (fearlessness), Sarva Dharma Samanatva (equality of all religions), Swadeshi (self-reliance regarding essentials), Asparsha Bhavana (untouchability)."

These vows were sought to be translated into daily living by Gandhiji with a meticulousness and rigour, which only those know who had the privilege of living with him, and, to the best of their ability, by those who lived in his Ashrams—the models of the ideal society he had in view.

With the help of these basic disciplines, the seeker after Truth moves nearer and nearer to Absolute Truth, nearer and nearer to God. While he has himself to live the Truth as he sees it unflinchingly—and there can be no divergence between profession and action—the votary of Truth has to be humble with those whose perception may differ from his. Hence Gandhiji's emphasis on *equal respect for all religions or perceptions of Truth*.

It was but natural for a person constantly struggling to realise God—which he felt was only possible through the service of man—that he should aim at establishing a non-exploitative society. In such a society, economic and political power should be highly decentralised and its basic unit should be a self-governing village, self-sufficient in regard to its essential.

II

THE ECONOMIC ORDER

Self-sufficient villages: Independence and inter-dependence

Just prior to Independence, after what turned out to be the last meeting with his "political heir", in an attempt at mutual understanding, Gandhiji thus summed up what could be called his vision of such a society in broad outline in his letter to Pandit Nehru:

> "1. The real question, according to you, is how to bring about man's highest intellectual, economic, political and moral development. I agree entirely.
> 2. In this there should be an equal right and opportunity for all.
> 3. In other words, there should be equality between the town-dwellers and villagers in the standard of food and drink, clothing and other living conditions. In order to realise this equality today people should be able to produce their own necessities of life, i.e., clothing, foodstuffs, dwellings and lighting and water.
> 4. Man is not born to live in isolation but is essentially a social animal, independent and interdependent. No one can or should ride on another's back. If we try to work out necessary conditions for such a life, we are forced to the conclusion that the unit of society should be a village or call it a manageable small group of people who would, in the ideal, be self-sufficient (in the matter of their vital requirements) as a unit and bound together in bonds of mutual co-operation and inter-dependence."[2]

A highly decentralised economic and political order was essential if the masses were to be masters of their own destiny. Asked, during his last detention at Poona, as to when India would be said to have attained complete independence he replied: "when masses feel that they can improve their lot by their own effort and can shape their destiny the way they like".[3] It is being increasingly realised that the individual is like a fly caught in the maze of the modern State and the modern economy. Democracy as "government by the people" is a myth and what is not "by the people" cannot be "for the people"—especially the weakest of them. And Gandhiji's primary concern was for the weakest. In a letter to a Bengali friend he wrote:

> "I give you a 'talisman'. Whenever you are in doubt or when the self becomes too much with you, try the following expedient. Recall the face of the poorest and the most helpless man whom you may have seen, and ask yourself if the step you contemplate is going to be of any use to him. Will he be able to gain anything by it? Will it restore him to a control over his own life and destiny? In other words will it lead to 'swaraj' or self-rule for the hungry and also spiritually starved millions of our countrymen?
>
> "Then you will find that your doubts and your self melting away."[4]

Gandhiji spelt out his idea of self-sufficient villages and their rationale in another letter to Pandit Nehru:

> "I am convinced that if India is to attain true freedom and through India the world also, then sooner or later the fact must be recognised that people will have to live in villages, not in towns, in huts, not in palaces. Crores of people will never be able to live at peace with each other in towns and palaces. They will then have no recourse but to resort to both violence and untruth.
>
> "I hold that without truth and non-violence there can be nothing but destruction for humanity. We can realise truth and non-violence only in the simplicity of village life and this simplicity can best be found in the Charkha and all that the Charkha connotes. I must not fear if the world today is going the wrong way. It may be that India too will go that way and like the proverbial moth burn itself eventually in the flame round which it dances more and

> more fiercely. But it is my bounden duty up to my last breath to try to protect India and through India the entire world from such a doom.
>
> "The essence of what I have said is that man should rest content with what are his real needs and become self-sufficient. If he does not have this control, he cannot save himself. . . .
>
> "While I admire modern science, I find it is the old, looked at, in the true light of modern science, which should be reclothed and refashioned aright. You must not imagine that I am envisaging our village life as it is today. The village of my dreams is still in my mind. After all, every man lives in the world of his dreams. My ideal village will contain intelligent human beings. They will not live in dirt and darkness as animals. Men and women will be free and able to hold their own against anyone in the world. There will be neither plague, nor cholera, nor small-pox; no one will be idle, no one will wallow in luxury. Everyone will have to contribute his quota of manual labour. . . ."[5]

At another place he further spelt out his idea of an ideal village:

> "An ideal Indian village will be so constructed as to lend itself to perfect sanitation. It will have cottages with sufficient light and ventilation built of a material obtainable within a radius of five miles of it. The cottages will have courtyards enabling householders to plant vegetables for domestic use and to house their cattle. The village lanes and streets will be free of all avoidable dust. It will have wells according to its needs and accessible to all. It will have houses of worship for all, also a common meeting place, a village common for grazing its cattle, a co-operative dairy, primary and secondary schools in which industrial education will be the central fact, and it will have Panchayats for settling disputes. It will produce its own grains, vegetables and fruit, and its own Khadi. This is roughly my idea of a model village. In the present circumstances its cottages will remain what they are with slight improvements. Given a good Zamindar, where there is one,

> or co-operation among the people, almost the whole of the programme other than model cottages can be worked out at an expenditure within means of the villagers including the Zamindar or Zamindars, without Government assistance. With *that asistance there is no limit to the possibility of village reconstruction.* But my task just now is to discover what the villagers can do to help themselves if they have mutual co-operation and contribute voluntary labour for the common good. I am convinced that they can, under intelligent guidance, *double the village income as* distinguished from individual income. There are in our villages *inexhaustible resources* not for commercial purposes in every case but certainly for local purposes in almost every case. The greatest tragedy is the hopeless unwillingness of the villagers to better their lot."[6]

Beyond self-sufficiency in the matter of essentials the basic unit would be linked with progressively bigger and bigger units for mutually beneficial tasks and on mutually advantageous terms till we find the lowest unit a respectable member of the world community. He never decried inter-dependence but he wanted non-exploitative and mutually beneficial relationship between the various units. He was of the view that if individual life was based on truth and non-violence, the individual would be a good member of the family. If the relations between the family members were similarly determined the family would be a good member of the village community. Similarly designed relationships at the village level would make the village a good unit of the district. And so on till we reach the international level, where the member States would be tied together by ties of friendship and co-operation, leading to peace instead of strife, as at present. So Gandhiji's individualism and regionalism were steps towards sound internationalism. He said:

> "I should like to see India free and strong so that she may offer herself a willing and pure sacrifice for the betterment of the world. The individual being pure, sacrifices himself for the family, the latter for the village, the village

for the district, the district for the province, the province for the nation, the nation for all."[7]

Gandhiji's internationalism in its sound sense is in strong contrast to current terms like 'internationalism', 'world citizenship' etc., as Richard Gregg so forcefully points out:

> "It is all very well to talk of the economic interdependence of the different nations, but to use that as a high sounding excuse for the sort of exploitation that is now going on will not do. International trade is excellent, but every nation ought to do its utmost first to produce its own food and clothing - the bare necessities of its life as a nation. That policy is not now followed by the controlling financial, industrial and political groups of any nation in the Western world, though perhaps Denmark and one or two other small European countries are not far from it. A large amount of self-dependence for the essential necessities of national life is the economic basis of national self-respect, mutual international respect and a preventive of national parasitism. Beyond and above that let trade proceed as merrily as it can, but with a minimum of exploitation."[8]

Nearer home, the towns are exploiting the villages by distorting their pattern of production-growing cash crops for industries rather than what they need themselves for healthy growth; destroying their crafts by dumping cheap industrial goods; destabilising them by dazzling them with false values; denying them their due share of the national cake, etc., etc. We have become insensitive to the exploitation of the villages by the towns and take it as the inevitable price to be paid for "progress" and "modernisation". In addition, we look upon the villager as backward, who needs to be improved by the culture of the town. Giving his idea of India's development goals to Gandhiji, Pandit Nehru wrote that one had to "encourage the village to approximate more to the culture of the town".

Gandhiji on the contrary had great regard for the villager. He said:

> "In the case of the Indian villager, an age old culture is hidden under an encrustment of crudeness. . . . Behind the crude exterior, you will find a deep reservoir of spirituality . . . you will not find such a thing in the West. . . Take away the encrustation, remove his chronic poverty and his illiteracy, and you have the finest specimen of what a cultured, cultivated, free citizen should be."[9]

He wanted the present relationship between the village and the town to be reversed. The village should produce its essentials and the town should act as the clearing house for its excess products. Whatever can be processed in the village should be processed there itself.[10]

The predominance of villages would be the surest insurance against war. The constant struggle with Nature sublimates the peasant's combative instinct. His continuous contact with Mother Earth imparts to him something of Nature's stability and its poise. Land is his security and he is confident that by and large if he puts in hard work, he and his children will not starve. His destiny was in his own hands in strange contrast to the factory worker, whose continued employment depends upon so many factors outside his control. That makes the industrial worker "unstable, insecure and suggestible".[11]—a ready material for war-mongers. But the peasant is an unremitting fighter for individual freedom and vigorous communities of peasant democracies are the surest guarantee of world peace and freedom. "There is no regime", says Professor Seignobes, "More pacific than a democracy of peasant proprietors. Since the world began, no such community has ever desired or prepared or commenced a war".[12]

The economy of permanence : Agriculture and cottage crafts

The village was to be a bee-hive of activity, where the present unemployment and under-employment would be unknown. The basic activity would be agriculture and the allied cottage crafts. Gandhiji's attitude to Nature was also informed by his sole concern with Truth. Man's relation to Nature, and man's relationship to man, was to be non-exploitative. Man, animals, plants and soil were to be bound together in symbiotic or mutually beneficial relationship and were together to complete the "Nitrogen Cycle", the "Wheel of Health":

> ". . . the healthy-fed soil transfers health to the plant, the plant transfers health to animal and man, by his wise agriculture, transfers it back to the soil. This is the Wheel of Health."[13]

Gandhiji was opposed to large-scale mechanised farming—collective or capitalistic—supported by heavy doses of chemical fertilisers, anxious to get as much out of the soil in as short a time as possible, thereby driving it to exhaustion. The attitude was "predatory" and led to the "rape of the soil". Deep ploughing cuts out the grass-roots which bind the soil and although it provides green manure to the soil, leading to bumper crops in the short run, its long-term effects on the moisture holding capacity and stability of the soil are disastrous. Combined with indiscriminate felling of trees for profit and the resulting destruction of the green cover on the soil, it leads to soil erosion, which is now going on a scale which threatens civilisation itself. Another modern practice which is ruinous for the soil is large-scale sowing of single crops, because it is cheaper. On the contrary, nature's law demands sowing of mixed crops whose demands on the soil nutrients are complementary, which need to be replenished in return by multi-nutrient organic matter. The neglect of feeding the soil with vegetable, animal and human waste, which provide humus, giving the soil its necessary porosity or sponginess, leads to serious consequences to soil health. Feeding the soil only on chemical fertilisers again leads to higher yields but poor, devitalised products. For as Mc Carrison says:

> "They (plants as well as animals) cannot thrive nor their seed attain to the fullest 'reproductive quality' unless they be provided, in addition to the mineral constituents of their food, with certain organic sustenances known as 'auximones'. These substances are as essential to the normal metabolism of plants as vitamins are to the normal

> metabolism of men and animals. They not only make the plant to build up from the simple ingredients derived from the soil these organic complexes required as food by man and animals but they enable it to elaborate vitamins without which the organic complexes cannot be properly utilised by the animal organism. Auximones are provided in the soil from decaying organic matter by the action of certain soil bacteria, and the best organic manure for this purpose is farmyard manure."[14]

While man is denying to the soil the organic matter it so badly needs, he is wasting it in abundance. Professor King says:

> "On the basis of the data of Wolff, Kellner, and Carpenter, or of Hall, the people of the United States and of Europe are pouring into sea, lakes or rivers, or into underground waters, from 5,794,300 to 12,000,000 pounds of nitrogen, 1,881,900 to 4,151,000 pounds of potassium, and 777,000 to 3,057,600 pounds of phosphorous per million of population annually."[15]

By the predatory use of modern science by the greed of man soil is whipped to exhaustion and when the local soil is exhausted food is imported from other countries and incentives provided for similar exploitation of more virgin lands, thereby netting more and more land into desolation. Imported food has the additional disadvantage that it has to be devitalised to be preserved during transit. Devitalised food is another serious problem the world is facing, leading to hungry people on full stomachs.

Scientific data is daily accumulating that man's predatory attitude to the soil has led to the adoption of disastrous agricultural practices which has upset nature's cycle of life and started a vicious circle of depriving the soil of its health leading to unhealthy, devitalised, non-resistant to disease plants, animals and human beings. Deserts have been set on the march and whereas on the one hand we are crying ourselves hoarse about food shortages and starvation as a result of growing population, we are doing everything possible to reduce the food growing potential of Mother Earth. Lord Northbourne says that the biggest of the Dust Bowls in California has advanced by forty miles in one year, while in the whole of the USA 15,000,000 acres of food land are being spoiled by erosion every year. In Africa, the Sahara is said to be moving southward at a mean rate of over half a mile a year, and the Turkana desert eastward at six or seven miles a year. The Northern Sahara was at one time reputed as the "granary of Rome". And it is believed that the Congo forest which is now separated from it by 1,500 miles of desert or semi-desert "reached nearly to Khartoum."[16] Jacks and Whyte say that erosion has been "one of the most potent factors causing the downfall of former civilizations and empires whose ruined cities now lie amid barren wastes that once were the world's fertile lands".[17] It is "humbling mighty nations, reshaping their domestic and external policies and . . . altering the course of world history more radically than any war or revolution".[18] Man's exploitative attitude to the earth has "brought", in the course of one century, "to the world's richest virgin lands a desolation compared with which all the ravages of the wars in history are negligible".[19] The famous agronomist, Edward Hyams, has trenchantly described the havoc being wrought by unscientific use of science to serve man's greed as follows:

> "The capitalist, with a whacking great dividend in mind and the Marxist, with a factory population to feed . . . are blissfully ignorant or criminally indifferent to the fact that their 'scientist' is shoppily inefficient and wasteful; for, instead of using the natural cycle cleverly to exploit plant life which constantly remakes its own nutrients in humus, he first of all exhausts the existing humus and then has to build and operate huge factories to make artificial fertilizers and distribute them, at enormous expense. The agricultural industrialist, seeing that trees fetch money for wood pulp . . . cuts them down. . . . The soil might have been all right, even without trees, but the agricultural industrialist . . . has noticed that the paper cost of cultivating a million acres of wheat and a million acres of cotton in single blocks, is less than that of the 10,000 mixed farms. . . . So he has been drawing on one set of nutrients year after

> year, pouring in millions of tons of expensive artificial fertilizers because he no longer has a live soil but dead dust. . . which the first wind blows off the naked rock and into the sea. . . . Thereupon the Marxist if he is inside the USSR. . . plants forest and grass and prepares for nature to restore the cycle; the capitalist says: 'what the hell? There is always Amazonia when we have used up our own' . . . . It's such an old story. First, the rich Yellow Earth of China ruined by the imposition of urban values; then the even richer tropical soil of Sind reduced to a barren desert by the great city populations of Harappa and Mohenjodaro. . . and so following, until the destruction, in less than fifty years, of the great fertile plains of the Middle West, by American capitalist greed and indiscipline; and the lasting shame of the Dust Bowl. Because of the industrialist, the anti-peasant, man has become a noxious disease organism of life on Earth."[20]

This is the result of treating agriculture as business and industry. The only sensible way, as Gandhiji advises, is to treat it as a way of life, where the farmer, treating it as a long-term asset on which he and his family depend, is interested in its conservation; applies all his ingenuity and experience, carefully husbanding all his resources, to get the maximum out of it without endangering its fertility—small, mixed farms, intensively cultivated, fed on human, animal and vegetable waste, using animal power for ploughing, threshing etc., and the farmers cooperating for essential services. This would be the economy of permanence, the economy of conservation. This is the extension of religion in the field of agriculture. "Religion . . . is needed for an enduring food supply for man and for a sound ecological relationship between man and earth and all its other creatures. Only the spirit is strong enough to curb man's unruly desire for power, his selfishness, greed, pride, short-sightedness, and tendency to exploit others".[21]

Subsistence agriculture needs to be supported by cottage crafts, which utilise all the small units of leisure of the entire family and add to the family income or meet its essential requirements other than food. Gandhiji was all in favour of upgradation of technology but so long as it did not destroy the decentralised character of production.

Man vs. machine

Gandhiji's attitude to machinery and the means of production was also dictated by his concern for Truth and non-violence. He called *Charkha* (the spinning wheel) the symbol of *Ahimsa* (non-violence), through which alone, he felt, a non-exploitative and non-violent society could be brought into being and sustained. His rationale was as follows:

(1) As the resources as well as the know-how were within the control of the millions, their destiny would be in their own hands. As consumption will be either by the producer (his family) himself and, his family or his neighbour no marketing complications or host of intermediaries will be able to confuse him and deprive him of the fruits of his labour.

(2) When production and consumption are localised the immediate, essential needs naturally get priority. These priorities get distorted through the intervention of the profit motive and the vastly enlarged market of today which enables the entrepreneur to cater to the luxury needs of the distant rich in preference to the essential needs of the local masses. Attention is diverted from the centre to the periphery.

(3) Work is carried out in a more congenial environment. The atmosphere of his own home is far healthier than the suffocating atmosphere of the factory. The work is done at his own pace and not in the tense atmosphere of the factory under the lash of the supervisor. His work is spread over a whole product and the varying processes involved give him rest unlike the factory where he has to continuously feed the machine in regard to a tiny part of the final product. He has again the sense of creation and pride therein.

(4) Production and distribution of wealth is simultaneous and the modern intractable problem of equitable distribution is avoided.

(5) Total production is not necessarily less in a system of production by the masses than in that of mass production by the machine. As Gandhiji put it: "Oh, yes, mass production certainly. . . but mass production (on individual basis) in people's own homes. If you multiply individual production millions of times, would it not give you mass production on a tremendous scale? . . . Your 'mass production' is production by the fewest possible number through the aid of highly complicated machinery. . . . My machinery must be of the most elementary type which I can put in the homes of the millions.[22]

(6) Employment is at its maximum and, therefore, crafts represent the best strategy for fighting our worst enemy—even worse than food shortages—which is unemployment and under-employment. Experience all the world over shows that organised industry—whatever be the rate of growth—cannot create the jobs that it destroys with the destruction of the traditional sector.

(7) It establishes equality and prevents the concentration of wealth in a few hands as does the modern machine-centred system of production, where "capital exploits the labour of a few to multiply itself, but the sum total of the labour of the crores, wisely utilised, automatically increases the wealth of the crores."[23]

(8) Production will be cheaper. The common notion of cheap machine made goods is a fallacy. When we take into account the infrastructural facilities that the State provides to industry and the social and biological costs that society bears, the real cost of industrial goods appears in its true dimensions. "Nothing can be cheaper", writes Gandhiji's official biographer, "than khhdi when it is produced from the cotton grown by the consumer himself for his own use". He goes on to say: "Nor can any supply of synthetic vitamins take the place of what home grown fresh vegetables, un-

processed whole foods and sunshine provide free to the worker who works upon and lives on and out of his plot of land. Similarly can there be any substitute for the natural health, vigour and vitality which direct relationship with the soil gives to the peasantry? But when our pre-occupation is with money values and our thinking in terms of 'prestige' and 'power', the demands of commerce and industry become easily equated with 'national interest'. The things that make for the primary well-being of man are neglected".[24]

Another aspect of economy is the tendency to waste, bred by disrespect for 'cheap' machine made goods. On the other hand, the handicraft worker has respect for every bit of resource that he finds useful in his environment. "All the Western nations", observes Stuart Chase, "have demonstrated their fitness to be classed as prodigal sons".[25]

(9) Production by individuals in their own homes also avoids the many serious problems that congregation of industrial labour away from their homes poses and the social and biological costs thereof. Long distances between the homes of workers and their place of work has increased the travel time very considerably and added to the tensions of industrial life. The atmosphere of confrontation and conflict between one union and another and between the unions and the management multiply these tensions. The cost of providing social services and civil amenities increases many fold. And so on.

Gandhiji's position may be summed up by saying that he was not against the machine as such but against the "mania for mass production". He was in love, he said, with the sewing machine, which did not destroy decentralised production on an individual basis but made it more efficient. He was by no means an advocate of stagnation. But he wanted innovations which would serve instead of enslaving man. His *Ashrams*—models of his ideal society—were seats where everyday living was subjected to continuous scrutiny and they were a beehive of small innovations which masses could immediately adopt;

and, adopted by the millions, their impact would be tremendous. His attitude to science, technology and machinery is well brought out by the following extract:

> "During the visit to England in 1931, at the end of a series of searching questions by an American Press Correspondent, Gandhiji was asked: 'So you are opposed to machinery only when it concentrates production and distribution in the hands of the few?'
>
> 'You are right',an swered Gandhiji. "I hate privilege and monopoly. Whatever cannot be shared with the masses is taboo to me. This is all."

Modern science has two aspects—the educative or fundamental and the economic or the technological. In its fundamental aspect, science has been an educative and liberating force, which has set free truth from dogma. This aspect of science Gandhiji personified as perhaps no other living person. None strove harder than he to cultivate that intellectual integrity, that habit of dispassionate enquiry into and search for objective truth—as against a fanatical assertion of the truth of one's own dogma—which the discipline of science demands, or to inculcate on the people at large the habit of a scientific approach to everything in life. He described the spinning wheel as "science reduced to the terms of the masses. In its economic aspect, he looked upon it as the means *par excellence* of overcoming the mental inertia of the masses and of quickening their intelligence and inventive faculty. At the beginning of the non-cooperation movement, when millions had taken to the spinning wheel and the allied processes, and everybody from the oldest village dame to the tiniest tot playing his *Takii* or carding bow, was busy thinking how to improve them, he once exultantly remarked: 'Never has the spirit of invention been more briskly at work among the common people than now'. I can never forget how his whole countenance beamed and his eyes glistened as he uttered that remark".[26]

Standard of living

His attitude to the much-bandied-about phrase, the "standard of living", heavily preoccupying the minds of social planners, was also dictated by the same principles. His economic system was best suited to secure for everyone the essentials of life– food, clothing and shelter—in the immediate present, primarily through their own effort, strengthened by mutual co-operation. It would in addition give greater joy and satisfaction from creative work, greater peace and happiness—man at peace with himself, with his fellows, with Nature and with his Maker. He regarded that as a higher standard of life, if not of living, than a life cluttered with the "toys of civilization". He wrote:

> "I have heard many of our country-men say that we will gain American wealth but avoid its methods. I venture to suggest that such an attempt, if it is made, is foredoomed to failure. We cannot be 'wise, temperate and furious' in a moment. . . . It is not possible to conceive gods inhabiting a land which is made hideous by the smoke and the din of mill chimneys and factories and whose roadways are traversed by rushing engines, dragging numerous cars crowded with men who know not for the most part what they are after, who are often absent-minded and whose tempers do not improve by being uncomfortably packed like sardines in boxes and finding themselves in the midst of utter strangers who would oust them if they could and whom they would, in their turn, oust similarly. I refer to these things because they are held to be symbolical of material progress. But they add not an atom to our happiness."[27]

The choice before humanity is whether to have a better man or a bigger basket of glittering toys, human values or material trash, as a result of which the life process itself is undermined. Evidence is rapidly accumulating that as a result of modern living physical and mental health is rapidly deteriorating.

Body-labour

Body-labour was basic to individual and social life. It was necessary for the individual to meet his own needs through physical labour. In his *Ashram* everybody had to participate in every activity of the *Ashram*: sweeping, kitchen work, cleaning of urinals and latrines etc. Even when he became very weak and could not take part in every Ashram activity, Gandhiji kept up the practice of cleaning his own latrine. Body-labour was one of the eleven vows repeated in his prayers every morning and evening. Tolstoy, who deeply influenced Gandhiji, said that it was impossible to obey the Five Commandments and control anger and lust without hard physical labour. Gandhiji was also of the view that man must get off the backs of one's fellows and earn his bread by the sweat of one's face. The present division of labour between physical and intellectual work was invidious. He felt all work must be equally respected and everybody must get equal pay for equal work:

> "all the Bhangis (sweepers), doctors, lawyers, teachers, merchants and others would get the same wages for an honest day's work. Indian society may never reach the goal but it was the duty of every Indian to set his sail towards that goal and no other if India was to be a happy land."[28]

Further, confining manual labour to the least educated left it mechanical and backward. His whole theory of education was based on making labour intelligent—the philosophy of the "thinking hand"—thereby raising its prestige as well as its productivity.

Equality of opportunity and the theory of trusteeship

Gandhiji was too much of a democrat to tolerate the present inequalities. He was also too much of a man of non-violence to remove them by dispossessing the rich by force. He was again too much of a practical man to indulge in pious hopes that the rich would of their own distribute their riches to the poor. So he evolved his Theory of Trusteeship. Briefly stated, it was that as man was from God and owed all his talents and even his physical body to Him, he had no absolute right to ownership. He could only hold his attributes and possessions as a trustee to use them in His service, which meant the service of humanity.

He will have "residuary ownership as against the absolute ownership as at present, regulated by the State. Apart from meeting his natural needs—and not luxuries—and retaining a certain commission, within reasonable limits, he would use the rest of his wealth in the interest of society. The capitalist would be persuaded to become a trustee of his wealth by appeal to his reason, failing which through non-violent non-cooperation.

In the beginning, the amounts would not matter, only the acceptance of the principle would. Once that principle was accepted by the majority of the people, the details could be worked out and incorporated in the law of the land. There would not be much difficulty in enforcing this law as the large majority of the people would have already accepted it. That would reduce State interference to the minimum.

As regards inheritance, Gandhiji explained, the original choice of the successor would be that of the first trustee, but will need to be finalised by the State. That would limit the power of the individual as well as of the State. Gandhiji's recommendation had the following advantages:

1. It would preserve individual freedom and initiative, which Gandhiji strongly believed in as the most precious assets of humanity to be guarded against any encroachment. He was, therefore, against nationalisation of private property or virtual expropriation through a steeply graded system of taxation. That would be replacing violence by the individual, which is at the base of heavy capital accumulation, in the present setup, by the violence of the State; and he preferred violence of the individual to the violence of the State. "The State", he said, "represents violence in a concentrated and organised form. The individual has a soul but the State is a soulless machine. . . . It is my firm conviction that if the State suppressed capitalism by violence, it will be caught in the coils of violence itself and fail to develop non-violence at any time".[29] There were many instances where people voluntarily devoted their wealth to the service of society, but he knew of none "where the

State has (had) really lived for the poor".[30] He therefore, preferred "not a concentration of power in the hands of the State, but an extension of the sense of trusteeship as, in my (his) opinion, the violence of private ownership is (was) less injurious than the violence of the State".[31] Even if encroachment of the State was inevitable he would endorse only "a minimum of State ownership". Again he wrote: "I look upon increase in the power of the State with the greatest fear" because "while apparently doing good by minimising exploitation, it does the greatest harm to mankind by destroying individuality, which lies at the root of all progress".[32]

2. While nationalisation or forcible attachment of property could remove existing individual inequalities, it does not destroy possessiveness which is at the basis of all conflict. Under trusteeship even though legal possession remains with the capitalist, possessiveness is taken away. That provides a remedy not only for removing existing inequalities but also for recurring inequalities, which the unequal talent given by God to men leads to.
3. It annexes the talents of the talented and their goodwill to use them for the good of society. In the case of nationalisation the reverse is the case. Slackness, inefficiency, corruption etc., are characteristic of bureaucratic control, which nationalisation leads to.

III

THE POLITICAL ORDER

Gandhiji's views on politics were also governed by his fundamental loyalty to God, Truth, Non-violence, even his love for India was subordinate to his love for God:

> "India's acceptance of the doctrine of the sword will be the hour of my trial. I hope I shall not be found wanting. My religion has no geographical limits. If I have a living faith in it, it will transcend my love for India herself. My life is

> dedicated to the service of India through the religion of non-violence."[33]

He was one of the greatest democrats of all times. For he saw God in humanity and tried to reach Him through the service of man. To him all men were equal as being from Him.

His concept of democracy, however, was different from that of Western democracy, where the tyranny of the majority against the minority and of the strong against the weak made a mockery of equality and of individual freedom. Western democracy, he regarded as "diluted Nazism or Fascism. At best . . . merely a cloak to hide the Nazi and the Fascist tendencies of imperialism".[34] And again: "No country in the world today shows any but patronising regard for the weak. . . My notion of democracy is that under it the weakest should have the same opportunity as the strongest".[35] True democracy – government of the people, by the people and for the people – he said, was only possible under complete non-violence. For the extermination of the opposition is the logical corollary of violence. Under it individual freedom is impossible.

The non-violent infrastructure for democracy had to be provided by generating mass initiative, mass education and mass power. He defined democracy as "the art and science of mobilizing the entire physical, economic and spiritual resources of all the various sections of the people in the service of the common good of all".[36]

As a logical corollary, he was opposed to the idea of the "Welfare State", and the spoon-feeding of the people which emasculates them. Jung points out that as a result of the increasing dependence on government which it breeds, "the people become a herd of sheep, always relying on a shepherd to drive them on to good pastures, the shepherd's staff soon becomes a rod of iron, and the shepherds turn into wolves".[37] "Self-government", said Gandhiji, "means continuous effort to be independent of Government control whether it is foreign government or whether it is national". "Swaraj Government will be a sorry affair if people look up to it for the regulation of every detail of life."[38] For "where administration is in foreign hands, whatever comes to the people comes from top and thus they become more and more dependent. Where it is broad-based on popular will, everything goes from bottom upward and hence it lasts. It is good-looking and strengthens the people".[39]

His ideal State was exactly the opposite of the Welfare State. It would govern the least or will not need to govern at all. For the individuals would be so self disciplined that they would need no outer discipline. "Political power", he said, "means capacity to regulate national life through national representatives. If national life becomes so perfect as to become self-regulated, no representation is necessary".[40] And again "In such a State everyone is his own ruler. He rules himself in such a manner that he is never a hindrance to his neighbours. In the ideal State therefore there is no political power because there is no State".[41]

This was his ideal. The nearest approach that one could make to it on the practical plane was "a predominantly non-violent Government" governing a predominantly non-violent society. The exact shape of such a State would automatically emerge if we could concentrate on building the non-violent strength of the people. In a predominantly non-violent State "the influence of the non-violent majority will (would) be so great as to command the respect of the principal elements in society".[42] The anti-social elements would have already come under the influence and control of the non-violent majority and the task of the police would be residual with the minimum use of force. Legislation again would be such as people imposed upon themselves and, therefore, would not require any violence to enforce it. The police would not be required to intervene in other conflicts—as between labour and capital—which would be solved by the non-violent sanctions devised by the parties concerned. External aggression again would be met by the non-violent strength of the people. The non-violent sanctions against social and political injustices and external aggression will be discussed more fully in a subsequent section.

The leaders and public servants of such a State would help people to stand on their own feet, especially in regard to their essentials. They would live in their midst like them, at their level and within their constraints. After Independence, his advice to the Governor-General and the Ministers to move to small, unostentatious houses and to eschew parties etc.—the paraphernalia for "prestige"—was characteristic of him. "What is more detrimental", he asked, "to the country's prestige—lack of food, clothing and shelter for the countless people of India, or living, in a simple style in unostentatious small houses, instead of costly, imposing piles, out of keeping with their surroundings?" His advice to the elite—the leaders of society—was:

> "Hitherto the villagers have died in their thousands so that we might live. . . . The former have died unknowingly and involuntarily. Their enforced sacrifice has degraded us. If now we die knowingly and willingly—our sacrifice will ennoble us and the whole nation."[43]

And again,

> "The golden rule to apply in all such cases is resolutely to refuse to have what millions cannot."[44] "We should be ashamed of resting or having a square meal so long as there is one able-bodied man or woman without work or food".[45]

"The only way", for the servants of the people, "is to sit down in their midst and work away in steadfast faith, as their scavengers, their nurses, their servants, not as their patrons, and to forget. . . the 'haves' . . . . . Let us tackle the humblest folk of the village".[46]

The centre of Gandhiji's concern, however, was the individual—his rights, his responsibilities and his potentialities. He regarded freedom of the individual as most sacred and abhorred any encroachment thereon. As a matter of fact, it was the individual's "self-rule" that was the basis of true democracy. The individual could grow only in freedom. He should have the "freedom to err and the duty of correcting errors".[47] In freedom alone he could really be moral. "So long as we act like machines there can be no question of morality. If we want to call an action moral, it should have been done consciously and as a matter of duty. . . . No action can be called moral, unless it is prompted by a moral intention".[48] "To make mistakes as a free man" is, therefore, "better than being in bondage in order to avoid them". For "the mind of a man who remains good under compulsion cannot improve, in fact it worsens. And when compulsion is removed, all the defects well up to the surface with even greater force".[49] If his freedom was sacrosanct, even more so was his responsibility, his duty. The ideal for the individual's strivings was summed up in the eleven vows, already mentioned, which were an essential part of Gandhiji's prayers.

Individual freedom cannot be preserved in the modern highly technological society, which is too complicated for most of the individuals constituting it even to understand, leave alone to control and direct. Gandhiji, therefore, believed in village republics, simple enough to be understood by all; self-sufficient in regard to their essential needs; connected with the wider world through ties of voluntary and mutually beneficial relationships and capable of defending its vital interests against the might of the whole world. He described these village republics as follows:

> "My idea of village Swaraj (self-government), is that it is a complete republic, independent of its neighbours for its own vital wants, and yet interdependent for many others in which dependence is a necessity. Thus every village's first concern will be to grow its own food crops and cotton for its cloth. Then if there is more land available, it will grow useful money crops, thus excluding Ganja, tobacco, opium and the like. . . . As far as possible every activity will be conducted on the cooperative basis. . . . Non-violence with its technique of Satyagraha and non-cooperation will be the sanction of the village community. There will be a compulsory service of village guards who will be selected by rotation from the register maintained by the village. The Government of the village will be conducted by the Panchayat of five persons annually elected by the adult villagers, male and female, possessing minimum prescribed qualifications. These will have all the authority and jurisdiction required. Since there will be no system of punishments in the accepted sense, this Panchayat will be the legislature, judiciary and executive combined to operate

> for its year of office. . . . Here there is perfect democracy based upon individual freedom. The individual is the architect of his own Government. The law of non-violence rules him and his Government. He and his village are able to defy the might of a world. For the law governing every villager is that he will suffer death in the defence of his and his village's honour."[50]

The linkage and interdependence of these village republics with each other and the wider world outside, Gandhiji indicated as follows:

> "In this structure composed of innumerable villages, there will be ever-widening, never ascending circles. Life will not be a pyramid with the apex sustained by the bottom. But it will be an oceanic circle whose centre will be the individual always ready to perish for the village, the latter ready to perish for the circle of villages, till at last the whole becomes one life composed of individuals, never aggressive in their arrogance but ever humble, sharing the majesty of the oceanic circle of which they are integral units. Therefore the outermost circle will not wield the power to crush the inner circle but will give strength to all within and derive its own strength from it. . . . No-one will be the first and none the last".[51]

What is the position of Parliamentary Democracy in Gandhiji's scheme of things ? This was the question Gandhiji was faced with when Independence was in sight and more acutely after Independence. He finally came to the conclusion that power corrupts and, therefore, a Parliamentary Democracy needed a watchdog to advise the voters about their representatives and keep a watch on them when in office, to recall them if they misused their position. They would get their moral authority from the service they would render to the people in building up their non-violent strength through intelligent constructive work. It was with this intention of building up such a force to guide political power that Gandhiji wanted to turn the Congress into the Lok Sevak Sangh (Organisation for the Service of the People). Power, he was convinced, always corrupts. Government ordinarily cannot be carried on without some use of force. Therefore, "a man who wants to be good and do good in all circumstances must not hold power". He can, however, "send those to the Government who represent his will. If he goes there himself, he exposes himself to the corrupting influence of power. But my representative holds power of attorney only during my pleasure. If he falls a prey to temptation he can be recalled. I cannot recall myself. All this requires a high degree of intelligence on the part of the electorate. There are about half a dozen constructive work organisations. I do not send them to the Parliament. I want them to keep the Parliament under check by educating and guiding the voters".[52]

IV

DEVISING NON-VIOLENT SANCTIONS

Real independence would come, said Gandhiji, not "by the acquisition of authority by a few but by the acquisition of the capacity by all to resist authority when it is abused . . . by educating the masses to a sense of their capacity to regulate and control authority".[53] The acid test of the reality of independence is "the consciousness" of the common man "that he is the maker of his own destiny".[54] The sanction Gandhiji devised against the misuse of authority to perpetrate social and political wrongs, was that of non-violent non-co-operation and Civil Disobedience. The effectiveness of these instruments would depend upon the degree of non-violence or love for the wrong-doer possessed by the non-co-operator or civil resister. There is no room for hatred for the evil-doer. The non-co-operation is only with the evil in him, and the technique is to awaken the good in him, the spark from God in the heart of every man, through self-suffering. The degree of the power of love possessed by the resister depends upon the degree of self-discipline that he has developed through the practice of the eleven vows—non-violence, truth, non-possession etc.—already mentioned. There is no end to the power of Love that one can develop in himself by continued self-less action through which he reestablishes His communion with God and gets possessed with his strength. A man of perfect non-violence—who has realised God and sees "Him in all that lives", feels one with all creation and ever lives the truth as he sees it up to the hilt—becomes a "living conduit of cosmic power, the power of truth (Satya)", "the highest expression of the soul".[55]

Is non-violent action only for individuals or for groups of human beings as well? "To me", said Gandhiji, "virtue ceases to have any value if it is cloistered or possible only for individuals".[56] He, therefore, spent his life in devising the technique of developing non-violence in the masses. He came to the conclusion that the means of livelihood of people had a great deal to do in moulding their minds. That explains the emphasis on "right livelihood" by Buddha. The occupations that men pursue must, therefore, be non-exploitative or involve the minimum of exploitation and violence. Therefore, he pleaded for a social and economic order based on subsistence agriculture and handicrafts. They should further be organised in village republics, self-sufficient in regard to their essentials. Money values will by and large not vitiate the atmosphere of such a society. No outsider will be able to exploit such a social group nor vice versa.

Another finding of his was that "Anything that millions can do together becomes charged with a unique power".[57] That has, however, to be done intelligently and with full knowledge of its implications. In his search for such an activity Gandhiji discovered sacramental spinning, in which millions could participate and through which one could identify oneself with the millions and the least among them. The spinning wheel, said Gandhiji, "has come in my search after the technique of non-violence". "And each day that passes makes my faith brighter."[58] He called the Charkha (Spinning wheel) as the symbol of non-violence. "The wheel as such", he said, "is lifeless but when I invest it with symbolism it becomes a living thing for me. Its sound, if it is musical, is in tune with non-violence. If it is unmusical, it is not in tune with it, for it indicates carelessness on my part".[59] These activities by the millions had to be done with care and scientific precision and with the full awareness of their implications to develop in the masses the intended non-violent strength.

With the masses trained through intelligent constructive work (activities intended to meet the basic needs of the life of the masses) and having full faith in their leader, whom they obey implicitly and who has developed a high degree of non-violence through selfless action and a life of rigorous self-discipline, a successful "fight" can be given against any social or political wrong. Gandhiji demonstrated this in varying situations again and again in his long career. He discovered that it was not necessary for all the participants in a Satyagraha to be fully non-violent. It was enough if they trusted their leader and gave him implicit obedience and the leader had the requisite non-violence. All need not have, he said, "the same measure of conscious non-resistance for its full operation. It is enough for one person only to possess it even as one General is enough to regulate and dispose of the energy of millions of soldiers who enlist under his banner, even though they know not the why and the wherefore of his dispositions".[60]

V

CONCLUSION

Gandhiji's philosophy may be summed up as follows:

1. God is the Ultimate Reality. He is Love, Truth.
2. To be true to your Maker, you must love His creation and serve it. Man's relations with soil, plants, animals and other human beings should be non-exploitative. The relationship should be symbiotic, mutually beneficial. This is necessary for a sound ecological balance, necessary for the health and happiness of life on this planet.
3. The implications of this basic promise are:
   (*a*) In agriculture, soil conservation through small-scale, intensive and individual farming; with maximum reliance on the principle of cooperation; based largely on organic manure from plant, animal and human waste; and relying largely on muscle and animal power. While making a judicious use of science and technology to increase

production, there should be no greedy attempt to force the pace of natural processes leading to soil exhaustion through deep ploughing and indiscriminate use of chemical fertilisers, insecticides and pesticides.

Regional self-sufficiency should be aimed at to keep the long-term interest of the soil always before us; to ensure correct priorities in production—needs before luxuries; to save on transport costs; to tie up more closely needs and the effort required to meet them; and to avoid the complications and exploitation involved in widely spread out marketing and sales operations. It will also avoid the necessity of devitalising food to conserve it during transit over long distances. It will also lead to a more effective identification and mobilisation of local resources. Further, it will avoid the exploitation of world trade in food for political purposes.

Production, again, would be for consumption rather than for profit or its money value.

(*b*) Subsistence agriculture would be supported by animal husbandry and cottage crafts, which would fight effectively unemployment and under-employment. The total production, when millions engage in it, would not necessarily be less than through mass production. Production carried on in the environment of the home will avoid many problems of management, provision of basic social services, many sociological problems of large congregations of people up-rooted from their natural surroundings etc., etc. Distribution and production will be simultaneous and concentration of economic power in a few hands would be avoided. Nor would it mean a stagnant economy. R & D, when applied to these occupations, would lead to innumerable small innovations which, when adopted, would start a wave of innovativeness in the millions and lead to the spread of the scientific temper as would have a far-reaching effect not only on the production processes but on rationalisation of life as a whole. Gandhiji's educational system was designed to universalise this impulse.

(*c*) Villages, self-sufficient in regard to their essentials, would be the basic economic units, which would be able to establish mutually beneficial relations in regard to the areas of inter-dependence with other units of the economy. Non-violence was only possible in a rural civilization. To the extent that towns continue or are allowed to exist they should subserve the villages instead of exploiting them as at present. They should provide the markets for the village products and what can be produced in the villages should not be produced in the towns.

(*d*) Politically, the most sacred thing to be guarded against any encroachment was individual freedom, combined with the most sacred duty of the most rigorous self-discipline and concern for others. The individual was to live for the family, the family for the village, the village for the district and so on till we reach the global level of loyalty. This organisation of society in ever-widening, concentric circles, where none dominates and where everyone helps everybody else, would be the means of establishing equality and individual freedom within the framework of interdependence.

The basic political unit was to be the self-governing village republic, governed through its own elected Panchayat, whose authority would be primarily moral, resting on its service to the village through constructive work.

Gandhiji did not work out the details of a predominantly non-violent State governing a predominantly non-violent people. For he said that the exact form of such a State would emerge as a result of the application of the laws of non-violence to the various live situations. A rigid theoretical formulation would not very much help. He, however, did indicate certain features of such a State:

(*i*) Such a state would allow and promote maximum individual freedom, initiative and self-reliance among the people.

(*ii*) Parliamentary democracy could work if there was a strong popular organisation to act as a watch-dog to guide, direct and recall, if necessary, people's representatives through their own moral authority with the people. This would keep the representatives on the right path. This was essential. For power corrupts. It is only when we proceed this way that the State would ultimately wither away.

(*iii*) While it might use the police against the hard core of the anti-social elements, the police would need to use only the minimum of violence as these elements would already have come under the influence of the predominantly non-violent society.

Ordinarily, the police would not come in and civil conflicts would be resolved through discussion and, as a last resort, through non-violent non-co-operation.

(*iv*) Foreign aggression would be met through non-violent non-co-operation.

The significance of Gandhiji's philosophy is that it comes at a time when human civilization—and human life itself—is faced with annihilation and the thinking sections of humanity—the large majority do not think, have no time for thinking and are driven helter-skelter with the current down the precipice—are feverishly and desperately searching for alternatives to our present philosophy of life which has culminated in the atom bomb. It raises two questions: is it a better alternative? and is it a feasible alternative? The answer to the first question would depend upon whether we would be content with meeting our essential needs or would want to spend our entire time and energy in meeting ever increasing wants; whether we want to develop human values: friendliness, creativity, peace and co-operation in preference to the unceasing, indiscriminate pursuit of money and machinery; whether we want competition in preference to co-operation; whether we want real joy and peace in place of feverishness and excitement; whether we want to impart to life an inwardness and restore the balance between the inner and the outer world; whether we want the ever-widening of the consciousness till it merges with God or a progressive narrowing of the self till it reaches annihilation—"a tiny speck on a tiny speck"; and finally, whether we want love or hatred, peace or war, survival or destruction.

While society may not find some of the options offered by Gandhiji very palatable because of force of habit, which turns luxuries into necessities and inessentials into essentials, yet it may be willing to accept them as the price for peace and survival provided it is convinced that non-violence can provide an effective answer to internal social and political injustices and foreign invasion. Doubts] have been expressed whether society can take such a radical turn from the atom bomb to non-violence. Such volte-face is as much a characteristic of natural and historical phenomena as slow evolutionary change: "The greater the sinner the greater the saint"; Ashoka the Terrible becomes Ashoka the Compassionate. The atom bomb is the ultimate in brute force and its only inevitable outcome could be the complete renunciation of such force. Non-violence, said Gandhiji, "is the only thing that the atom bomb cannot destroy". It was bound to take its place. He said: "I did not move a muscle when I first heard that an atom bomb had wiped out Hiroshima. On the contrary I said to myself, 'Unless now the world adopts non-violence, it will spell certain suicide for mankind' ".

As regards the power of non-violence, Gandhiji said: "Non-violence is . . . soul force or the power of godhead within us. Imperfect man cannot grasp the whole of that Essence. . . but even an infinitesimal fraction of it, when it becomes active within us, can work wonders. . . . Non-violence is like radium in its action. An infinitesimal quantity of it embedded in a malignant growth, acts continuously, silently, and ceaselessly till it has transformed the whole mass of the diseased tissue into a healthy one. . . . It is self-acting. The soul persists even after death, its existence does not depend upon the physical body. . . . It transcends time and space. It follows, therefore, that if non-violence becomes successfully established in one place, its influence will spread everywhere".[61] Some say that non-violence can only act where there is a sub-stratum of morality but it can be of no avail before dictators and tyrants, who have no moral conscience. He did not believe that anybody was beyond redemption. For all are from God and have his spark within them, though deeply encrusted. The harder the crust, the greater the non-violence required to break it:

> "The hardest metal yields to sufficient heat; even so must the hardest heart melt before the sufficiency of the heat of non-violence. And there is no limit to the capacity of non-violence to generate heat. . . . During my half century of experience I have not yet come across a situation when I had to say that I was helpless, that I had no remedy in terms of non-violence".[62]

There were, however, two basic conditions required for successfully wielding the weapon of non-violence: "a living faith" in the immortality of the soul as distinct from the body and in the "God of Love". He admitted, however, that the science of non-violence was still incomplete but that was true of all sciences. As a matter of fact work on it had just begun. Half a century is "nothing in discovering the hidden possibilities of this force and working them out",[63] he said. At another place, he adds:

> "Modern science is replete with illustrations of the seemingly impossible having become possible within living memory. But the victories of physical science would be nothing against the victory of the Science of Life, which is summed up in Love which is the Law of our Being."[64]

And again, he said, that non-violence:

> "is the strongest force known. We have not been able yet to discover the true measure of the innumerable properties of an article of daily use like water. . . . Let us not, therefore, make light of a force of the subtlest kind like Ahimsa and let us try to discover its hidden power with patience and faith. . . . It is difficult to forecast the possibilities when men with unflinching faith carry this experiment further forward. . . . Our usual experience is that in most

> cases non-violence is the real antidote of violence, and it is safe to infer from it that the highest violence can be met by the highest non-violence."[65]

To the doubting Thomases who, while agreeing to the superiority of the non-violent method, were doubtful if human nature could rise to the occasion and go through the discipline required for its practice, his answer was:

> "The usefulness of the non-violent method seems to be granted by all the critics (but) they gratuitously assume the impossibility of human nature, as it is constituted, responding to the strain involved in non-violent preparation. But that is begging the question. I say, 'you have never tried the method on any scale. In so far as it has been tried, it has shown promising results'. "[66]

Non-violence is one of the oldest heritage of man. The Law of Love has been proclaimed by many religious prophets and seers. Many individuals and sects have indicated its validity. The methods of developing the power of love within oneself and within groups have been developed. Gandhiji developed this great inheritance further and for the first time applied it to resisting social, economic and political wrongs on a scale hitherto unknown. He demonstrated its efficacy in various situations and showed the way how this science was to the developed further. He has been supported in many of his findings by researchers in modern science.[67] It is for posterity to draw upon his work and develop the only possible alternative to the atom bomb, which has emerged. Gandhiji's contribution may be summed up in Dr. Zimmer's words. He says that Gandhiji's programme of Satyagraha, "is a serious, very brave, and potentially vastly powerful modern experiment in the ancient Hindu science of transcending the sphere of lower powers by entering that of higher. . . . This is a battle waged on the colossal, modern scale, and according to the principles derived from the textbooks, not of the Royal Military College, but of Brahman".[68]

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FOUR

THE EDUCATIONAL IMPERATIVE : THE PHILOSOPHY OF NAI TALEEM

I

A PRAGMATIC PHILOSOPHY

"Type of the wise, who soar but never roam
True to the kindred points of heaven and home."[1]

Gandhiji had a prophetic vision. He saw far into the future and his vision comprehended not only the future of the human race but also its relationship with the cosmos. He was, however, also perhaps the greatest management expert known to history. He did not manage a multinational, or even a factory, he managed a revolution. He carefully took stock of his available resources and present constraints and with his unmatched resourcefulness, he set about perfecting his instruments. He planned with the most meticulous care the various stages through which to reach his goal and perfected his plan at every stage through incessant experimentation. His instruments were the ordinary men and women of India's villages. For his revolution was aimed at bringing about God's kingdom on earth (Ramaraj), in which the lowliest of the low would have equal opportunity for full growth with the tallest in the world; and he knew that if a revolution was to be in the interest of the masses it had to be wrought by the masses themselves. His sole aim, therefore, was to enable them to realise their potentiality, which was nothing less than awakening the God in them. His education programme was calculated to accomplish this task. As he said, his system of education was "conceived as the spearhead of a silent social revolution fraught with the most far-reaching consequences".[2] It was the result of his own "experiments with truth" stretching over many decades. Lest somebody should dismiss his experiments as irrelevant to the mass of the people, he said that he was not interested in doing anything which the masses could not duplicate. In this context he held his own imperfections as an asset in the role God had assigned him "My imperfections and failures", he said, "are as much a blessing from God as my successes and my talents, and I lay them both at His feet. Why should Hehave chosen me, an imperfect instrument, for such a mighty experiment? I think He deliberately did so. He had to serve the poor, dumb, ignorant millions. A perfect man might have been their despair. When they found that one with their failings was marching on towards Ahimsa, they too had confidence in their own capacity. We would not have recognised a perfect man if he had come as our leader, and we might have driven him to a cave".[3]

Gandhiji's "philosophy" of education thus was not a full-fledged statement of his ideas, providing a theoretical framework for his educational programme. It was the sum total of his reactions to concrete situations, guided only by his overall concern with man's goal which was to reach God through the service of man. The emerging policies and programmes were calculated to establish, preserve and develop a non-violent social, economic and political order. So his ideas were highly pragmatic and were saved from being chaotic only by a central frame of reference: truth and non-violence. The general ideas which emerged as a result of his ceaseless experiments with truth in the field of education may now be summed up.

First glimpses

The situation to which Gandhiji reacted most strongly was that in regard to the then prevailing system of education introduced by the British; and his reactions give us the first glimpses of his educational philosophy. He called the system as "a national tragedy of first importance".[4] It was "not only wasteful but harmful".[5] It did "not meet the requirements of the country in any shape or form".[6] It was "conceived and born in error, for the English rulers honestly believed the indigenous system as worse than useless", and "nurtured in sin, for the tendency has been to dwarf the Indian body, mind and soul".[7] Its main defects, as Gandhiji noticed, may be summed up as follows:

(1) It was an alien system, rooted in a foreign culture, which uprooted them from their own soil and, in regard to their own culture, they developed an inferiority complex. A healthy synthesis with other cultures was only possible when one had gained a thorough understanding, appreciation and pride in one's own culture. This was shown by the fact that its products imbibed values different from their own. It encouraged materialism instead of spiritualism, competition and violence instead of cooperation and non-violence (Ahimsa). "We are (were) inheritors of a rural civilisation",[8] while the education system bred urban values and led to accelerated urbanisation. In Government institutions no religious instruction was provided, resulting in the spiritual bankruptcy of the students.

(2) It was given in English which discouraged the development of the indigenous languages; was a tremendous strain on the energies of the students; prevented percolation of knowledge to the masses and created a gulf between the masses and the elite; killed our originality and bred a tendency to imitate; and added to the cost of education in a poor country. As a result of English being the medium of instruction, we have lost all originality. We have become "birds without wings"[9], "faithful imitators of the west",[10] "blotting sheets of Western civilisation".[11]

(3) It was primarily literary and neglected bread-labour, resulting in the lack of spirituality, a lack of the sense of the dignity of labour and a conflict between the

intellectual and the labouring classes. It led to distorted development of the personality through the neglect of the development of the bodily organs; and unemployment through its neglect of manual skills and vocational training. It also was responsible for the decay of our village handicrafts and the poisoned relationship between the cities and the villages.

(4) It did not build character; did not prepare the students for fighting social evils and for service. The increase in hypocrisy (discrepancy between profession and action), selfishness and tyranny among the educated was due to the "prostitution" of education—where education was looked upon as a means of acquisition of wealth and position rather than a mental discipline and a spiritual experience. This system of "false education"[12], "encourages this vicious tendency, misdirects the mind and thereby hinders its development".[13]

(5) It represented outdated practices in the West: "We ignorantly adhere to their cast-off system".[14]

(6) It was elitist in the sense that only a small percentage could avail of it, especially at the higher stages. The democratic and moral principle, however, should be that what could not be shared with the masses should be taboo to us.

Gandhiji was, therefore, of the view that the system needed "a radical overhaul".[15]

II

ITS BASIC TENETS

Dual role of education

Like most educationists, Gandhiji conceives a dual role for education: the fullest and harmonious development of the individual in freedom and preparing him for the preservation and development of the social order in which he is born.[16] This is inevitable even when our concern is solely with the development of the individual. For the individual does not grow in a vacuum. His growth is the result of the interaction of his mind with his environment—both natural and social; and, as an important force in the growth of the individual social environment cannot be ignored by education, even when its professed concern is with the individual alone. The two claims on education, however, of untrammeled growth of the individual and of social commitment are balanced differently in different societies, depending upon the emphasis they lay on individual freedom. In Gandhiji's system of thought, however, there was perfect fusion of the two claims. For the highest growth of the individual lay in developing in him the power of *Ahimsa*, the soul force, and to awaken the God in him; and the social order Gandhiji wanted to develop was a non-violent one requiring for its establishment and preservation non-violent individuals. The two claims—of the individual and society—were not in conflict and were really inter-dependent. Society is not a competitor with the individual in claiming [the attention of education. It is the means of the highest development of the individual, which is the aim of education. Such a society would be based on love, voluntary cooperation and maximum freedom to the individual and minimum powers to the State, which would ultimately vanish. The interests of the individual and society are thus identical: "I believe that if one man gains spiritually the whole world gains with him and, if one man falls, the whole world falls to that extent".[17] "I value", says Gandhiji, "individual freedom but you must not forget that man is essentially a social being. He has risen to his present status by learning to adjust his individualism to the requirements of social progress. Unrestricted individualism is the law of the beast of the jungle. We have learnt to strike the mean between individual freedom and social restraint. Willing submission to social restraint for the sake of the well-being of the whole society, enriches both the individual and the society of which one is a member".[18] Gandhiji wanted to create a society in which the individual freedom and the social good would act and interact till they become one. Since the individual develops through service of others—which is the means of realising God, and is the highest goal of individual aspiration and endeavour—preparing the individual for service becomes an important objective of education: "The end of all education is service".[19] The main claimant of this service in India were the rural areas. "The village life has to be touched at all points, the economic, the hygienic, the social and the political".[20] The "equipment for this service is a large heart and a character above suspicion".[21] Hence the emphasis on character building, citizenship training, training through non-violent occupations--the village crafts—co-operative work, fighting social evils, duties before rights, toleration and respect for others' views become important ingredients of education for a non-violent society and world peace. If we want a society free from violence and war, we have to educate the individual in non-violence with the thoroughness with which the dictators prepared him for violence—"The boys and girls there are taught the science of violence from the beginning, and you will find that the examples have been chosen with a view to inculcate the military spirit".[22]

The educational process—Role of external and internal discipline

"I would feel", says Gandhiji, "that if we succeed in building the character of the individual, society would take care of itself. I would be quite willing to trust the organisation of society to individuals so developed".[23] Hence to him, the individual was "the one supreme consideration". It was "intrepid individuals breaking down inhuman customs and usages" that were at the heart of all reforms.[24] The moral development of the individual can, however, take place only in freedom. But freedom is not license. Only external discipline has to be replaced by internal discipline; and Gandhiji placed the utmost emphasis on developing this internal discipline based on the power of discrimination or development of character. Education is thus the building up of the capacity for unhampered critical enquiry, looking truth in the face and living it. In the process of the development of character one has to pass through a period of external discipline till the discriminatory power has been developed. Till one understands them one has to take things on faith in the teacher. For one thing, everything cannot be understood by reason alone. One has to live one's faith, as Cardinal Newman said, before one can realise its truth. Explaining the student's duty, Gandhiji says that while he "need not believe what does not appeal to him" and he should put his doubts respectfully before his teachers, he should "do without believing what he is asked to do, not out of fear, not out of churlishness, but with the knowledge that what is dark to him today, will some day be made clear to him".[25] "It is an aid to his (a student's) intelligence for him to come voluntarily under discipline".[26] A certain discipline is the law of life: "All things in the universe including the sun and the moon and the stars, obey certain laws. Without the restraining influences of these laws, the world will not go on for a single moment".[27] "A man who chooses the path of freedom from restraint, i.e., of self-indulgence will be a bound slave of passions, whilst the man who binds himself to rules and restraint releases himself."[28] For "Restraint self-imposed is no compulsion".[29] And again: " . . . there is compulsion and compulsion. We call self imposed compulsion self-restraint. We hug it and grow under it".[30] "Social restraints generally are healthy and we reject them to our own undoing."[31]

The teacher's duty, on the other hand, is not to exploit this implicit faith of the student. Firstly, the teachers must be honest with themselves and "rigorously practice" "in their own persons", "the virtues they want their students to imbibe".[32] Their very association with the students, whether on the playground or in the class-room, will then give the pupils a fine training in these fundamental virtues".[33] Otherwise, "Even a lofty utterance, that has not the backing of sincerity and experience, will be inert and lifeless, and will utterly fail to penetrate and quicken the hearts of man, while the speech that springs from self-realisation and genuine experience is always fruitful".[34] Without this transparent sincerity, the teacher is not able to establish with his pupils that "heart-contact", which is the most important and effective part of the education process. Secondly, the teacher's "authority" should be enforced through Ahimsa, which is no "wooden or lifeless dogma, but a living and life giving force". "In the hands of the educationist, therefore, it ought to take the form of the purest love, ever fresh and ever gushing spring of life, expressing itself in every act."[35] Thirdly, it is "the duty of the teacher to teach his pupils discrimination. If we go on taking in indiscriminately, we would be no better than machines. We are thinking, knowing beings and we must, in this period distinguish truth from untruth, sweet from bitter language, clean from unclean things and so on".[36] Fourthly, the teacher must not impose his views on the pupils. He must "stimulate the reasoning faculty of boys and girls under their (his) care" and by continuously taxing their reason "make them think for themselves".[37] And even when he is presenting a view of life, he would encourage them to use it as a draft for perfecting it for themselves in the light of their experience, their experiments with truth. For the aim of education is to enable the student to have a vision of truth relative to the point where his personality stands and to fill him with the urge to ceaselessly move forward from relative towards absolute truth.

To make things fool proof, Gandhiji devised his non-violent sanctions against the teachers if they misused their position or neglected their duty. If they compel students against their wills, the students must resist, "even at the cost of life".[38] If after honest trial they discover that what has been taught to them is a falsehood and the teachers themselves do not live it, they have a right to proclaim its falsehood. If something repugnant to morality, like obsene literature, is forced on them, they have a right to protest and even to strike, though non-violently.

Education, a coordinated multi-pronged process

Education, according to Gandhiji, is not a linear activity. It must address itself to the head, heart and hand, symbolising the senses, the mind and the spirit. It must lead to a harmonious development of body, mind and spirit and develop an integrated personality. That integration can best be effected through a life-centred, activity-centred and problem-centred education. That education, says Gandhiji, "alone is of value which draws out the faculties of a student so as to enable him or her to solve correctly the problems of life in every department".[39] The same emphasis on a life-centred education instead of a book-centred education is contained in the following: "The only knowledge and culture by which humanity has advanced, he (Gandhiji) always maintained, is that which springs from honest, conscientious and intelligent performance of whatever duty may come one's way, no matter how humble, rather than from book-learning".[40] Learning is not a passive process. It takes place through vigorous interaction between the individual and his environment.

A life-centred education alone calls into play and develops the entire personality—'body, mind and spirit' or the trinity: heart, head and hand. Of these three Gandhiji attaches the highest importance to the development of the spirit, "The culture of the heart or the building of character".[41] "Culture of the mind must be subservient to the culture of the heart."[42] If this infrastructure of character could be built "the children could learn all the other things themselves or with the assistance of friends".[43] The basic things for the 'culture of the heart' is to develop an "unswerving faith in God".[44] This can be done only through a life of purity, austerity and simplicity of a true Vidyarthi or Brahmchari—who exercises "control in thought, word and action, of all the senses at all times and all places"—and a service to our fellow beings in a spirit of sacrifice, which is a way of developing and expressing love. At another place he defines character-building as trying "to develop courage, strength, virtue, the ability to forget oneself in working towards great aims".[45] And again: "To develop the spirit is to build character and to work towards a knowledge of God and self-realisation. And I held that this was an essential part of training of the young, and that all training without culture of the spirit was of no use, and might even be harmful".[46] The building of character also involves the training of emotions, as distinct from the intellect, so that one instinctively and fearlessly sides with truth and non-violence against untruth and violence. When the emotions are trained reason itself no longer remains the handmaid of desire, of blind instinct but becomes an agency of "discrimination between good and evil". Further, the beauty of the soul so developed reflects itself in outer behaviour and manners. Gandhiji himself was a model of refined manners. So while all modern educationists emphasise character and personality building, Gandhiji's uniqueness was in his concept of character where, as elsewhere, he touches the God-head at one end and the Mother Earth on the other. His educated man, with the ever-present sense of God in his heart, did his worldly duties with efficiency and charm. In the building of character, while denominational religion cannot have any place in government schools, the teaching of ethical principles common to all religions should be an important part of all education. But these cannot be taught through words or books but only through the life of the teacher. Denominational religion can also be taught if the study of the tenets of other religions, as explained by their own votaries, is also included. That will have the advantage of giving the pupil "a grasp of the rock bottom unity of all religions"[47] and breed in the pupils equal respect for all religions.

As regards intellectual development, though it came only after the culture of the heart, it was an important component of the education packet as Gandhiji conceived it. For it played an important part in the scheme of non-violence: "If intellect plays a large part in the scheme of violence I hold that it plays a larger part in the field of non-violence".[48] ". . . True practice of Ahimsa means also in one who practices it, the keenest intelligence and wide awake conscience".[49] "Truth and non-violence are not for the dense. Pursuit of them is bound to result in an all-round growth of the body, mind and heart."[50] So the intellect is both the means to and the product of progress towards truth and non-violence, which should be the ultimate aim of all education. The "quickest development of the mind can be achieved by artisan's work being learnt in a scientific manner. True development of the mind commences immediately the apprentice is taught at every step why a particular manipulation of hand or a tool is required".[51] The scientific temper created by asking "the why and wherefore" of everything done has far-reaching effect on the rationalisation of the entire spectrum of life and is the pre-requisite of growth and development. Literary and academic training, though by no means the only or the best means of intellectual training, is an important means thereto. Gandhiji valued it "too much to despise or even belittle its merit as a vehicle of education".[52] All that he condemned was the bloated importance given to it in the prevailing system of education. By itself it was a neutral and we could have "unlettered saints and erudite scoundrels".[53] To be useful it had to come in proper sequence and in relation to life and action. "In its place it can be of use and it has its place when we have brought our senses under subjection and put our ethics on a firm foundation."[54] Again, knowledge must be translated into action. Otherwise it is only so much inert matter clogging the intellectual and the moral being of man. It is also best imparted in relation to life and activity. For the intellect has to be stimulated and developed, not merely stuffed with information, with inert ideas. "Education with inert ideas", says Whitehead, "is not only useless: it is above all things harmful—*corruptio optimi, pessima*".[55] The sequence of literacy training in his scheme of education, he stated as follows: "In my scheme of things the hand will handle tools before it draws or traces the writing. The eyes will read the pictures of letters and words as they will know other things in life, the ears will catch the names and the meaning of things and sentences. The whole training will be natural, responsive, and therefore, the quickest and the cheapest in the land. The children of my school will, therefore, read much more quickly than they will write . . . they will trace correct figures of the objects they see. If the schools of my conception ever come into being they will vie with the most advanced schools in quickness so far as reading is concerned, and even writing, if it is common ground that the writing must be correct and not incorrect as now in the vast majority of cases".[56]

Equally important is the development of the body. He would give "compulsory physical training through musical drill".[57] Being an economist to the core and ever keen to kill many birds with one stone, his preference, however, was for enough physical exercise in the natural course of performing life's essential activities used educationally, which would render "artificial exercises . . . unnecessary".[58] Again, while Gandhiji laid special emphasis on the development of the finger skills, he was equally sensitive to the need for the aesthetic development of the eye, the throat and the ear. He said: "The modulation of the voice is as necessary as the training of the hand. Physical drill, handicrafts, drawing and music should go hand in hand in order to draw the best out of the boys and girls and create in them a real interest in their tuition".[59] But in keeping with his view of education as an integrated process, he wanted the effects even of these apparently isolated activities to permeate the entire life of the students. He said at Santiniketan: "The music of life is in danger of being lost in the music of the voice. Why not the music of the walk, of the march, of every movement of ours, and of every activity? It was not an idle remark which I made at the Mandir service about the way in which boys and girls should know how to walk, how to march, how to sit, how to eat, in short how to perform every function of life. This is my idea of music".[60]

Body, mind and spirit develop best in integration. Developing them in isolation is bad economics and bad education. He says: "I hold that true education of the intellect can only come through a proper exercise of the training of the bodily organs, e.g., hand, feet, eyes, ears, nose etc. In other words, an intelligent use of the bodily organs in a child provides the best and quickest way of developing his intellect. But unless the development of the mind and body goes hand in hand with a corresponding awakening of the soul, the former alone, would prove to be a lopsided affair. By spiritual training I mean education of the heart. A proper and all-round development of the mind, therefore, can take place only when it proceeds *pari passu* with the education of the physical and spiritual faculties of the child. According to this theory, therefore, it would be a gross fallacy to suppose that they can be developed piecemeal or independently of one another".[61] For, "Man is neither mere intellect nor the gross animal body, nor the heart nor the soul alone. A proper and harmonious combination of all the three is required for the making of the whole man and constitutes the true economics of education".[62] One is reminded of the cryptic description of current compartmentalised teaching by Ernest Lavisse as "a fragment of an educator addressing itself to a fragment of a pupil about a fragment of a subject".[63] Integrated education can best be provided, especially in the Indian rural context, through rural handicrafts.

Education, the process of establishing dynamic interaction with environment

In today's close-knit world while the global perspective has always to be kept in view, the training in the attitudes required for ordering our lives in the light of this perspective has still to be done in the local environment. While the universal air is important, most of the nourishment is drawn by the plant from its local specific soil. Gandhiji had suggested his own structure of society, based on non-violence, in which the loyalties at various levels could be reconciled—where, as a matter of fact, each would strengthen all the other levels and would in turn be strengthened by them—as indicated in the previous chapter. Even the local and regional environment has its past heritage, its present needs and its future goals. History is a combination of continuity and change. And education has to develop a critical, scientific outlook towards this whole process. In regard to the past, however, one has to approach it with reverence, as it represents the accumulated experience of the race, and reject what is no longer relevant to the present only after the most careful examination. A summary rejection of the past would be presumptuous if not foolish. Gandhiji is very critical of the tendency of modern educated people to laud everything Western and decry everything indigenous. A foreign culture, however good in itself, was unsuited for our children "whilst they had not imbibed and become rooted in their own".[64] To those who held that all that our reformers had been able to achieve was due to their Western education his reply was that on the contrary their achievements were "due to the extent they retained their Eastern culture in spite of the adverse influence of the Western".[65] In regard to himself he said: "whilst I have fully acknowledged my debt to Western culture, I can say that whatever service I have been able to render to the nation has been due entirely to the retention by me of Eastern culture to the extent it has been possible. I should have been thoroughly useless to the masses as an Anglicised, denationalised being, knowing little of, caring less for and perhaps even despising their ways, habits, thoughts and aspirations".[66] It was the duty of education to create in the pupils this rootedness in their own soil, and develop a critical appreciation of their own culture—to understand, develop and respect their own identity. He said: ". . . we shall move to our goal in the manner of the east, not in the manner of the west, for we are of the east. We shall grow up in the beautiful manners and customs of India". His value system, his emphasis on truth and Ahimsa, is rooted in our ancient tradition: "Our civilisation tells us with daring certainly that a proper and perfect cultivation of Ahimsa, which in its active form means purest love and pity, brings the whole world to our feet".[67] Yet he was no blind follower of the past. In fact he was one of the greatest revolutionaries history has known.

The present is the inheritor of the past and the builder of the future and as such claims equal attention from education. In the context of Gandhian thought the greatest need of the present was to develop self-government and cooperative group action among the people—both the childern and the adults. They were also of immense significance to his future goal of a cooperative, instead of a competitive society governed by internal rather than external discipline. Co-operation and self-government were, therefore, at the heart of the educational process according to Gandhiji.

Integrated education

Knowledge of various subjects is best imparted in integration and in interaction instead of in a compartmentalised way. The best foci of such integration are provided by life's problems.

Education through the mother tongue

Education being the process of the development of the whole man, the training of his thoughts and emotions, in close relationship with—as a matter of fact, through environment and ethos of the people, can be best imparted only through the mother-tongue, which has developed in response to the need to express the community's psyche, their total emotional and intellectual needs. "I must cling", says Gandhiji, "to my mother-tongue as to my mother's breast, in spite of its shortcomings. It alone can give me the life-giving milk".[68] Other languages could be learnt in addition to serve specific purposes of specific people, but not at the expense of the mother-tongue.

Education through rural handicrafts

The harmonious development of the individual being the aim of education, the medium that calls upon and develops all the three ingredients—body, mind and spirit—in coordination is obviously the best medium of instruction. Such a medium, said Gandhiji, was best provided by the village handicrafts. Education at all stages, therefore, should be through these crafts. In his Foreword to "Educational Reconstruction" Gandhiji described Basic Education as education "through village handicrafts". In the Basic Education Conference of January 1945, he extended the central principles of basic education to all education "from the moment of conception to the moment of death". The polar star in these uncharted waters was still the village handicrafts. The idea was reiterated by Gandhiji in regard to adult education in the August 1945 meeting of the Adult Education Committee of the Hindustani Talimi Sangh; and in regard to all stages of education in the 1946 Conference of Education Ministers in Poona, where he emphasised that even university education was to be "an extension and continuation of the basic education course".[69] Even in the cities education was to be through village handicrafts. For if the cities are to pay back to the villages "for the strength and sustenance which they derive from them, instead of selfishly exploiting them", through their "social reconstruction" then "the vocations through which they (their children) are to receive their education ought to be directly related to the requirements of the villages".[70] The objective of craft-work in schools was two-fold: to act as the focus for the integration of the knowledge of various subjects; and to teach sufficient skill in a craft so that the pupil can pursue it "as an occupation after finishing his full course".[71] The idea of manual training as a component and even a means of some education is generally accepted but that the highest education could be imparted solely through the medium of craft was a revolutionary idea and Gandhiji's original contribution. This idea had far-reaching pedagogic, social and economic significance.

Pedagogically, crafts provide activities which children can handle. These activities throw up problems to solve which knowledge is gained, which, as evolutionary psychologists tell us, is the only way in which thinking in man develops. The usual way of developing the thinking power through books, unrelated to action, is not the rational way. For "information thrust on the mind apart from action is most often a burden on the memory and causes intellectual indigestion if nature does not come to the rescue and cast such learning to oblivion".[72] Knowledge which remains untranslated into action is so much inert matter clogging the intellectual and moral being of man.

Again, knowledge through this process of craft problem identification and solution search, comes in integrated units—the problems providing the foci for integration—instead of the usual compartmentalised subjectwise knowledge and develops the whole man, an integrated personality.

Again, intellect to have healthy growth must develop as a part of a coordinated, harmonious development of the whole man—body, mind and spirit. Otherwise it becomes a distorted growth. Craftwork—say the craft of spinning—develops the bodily organs: the fingers skills, an eye for detail, eye and muscle coordination. Identification of problems and finding solutions for them with the help of the knowledge of various subjects develops the intellect. The performance of co-operative labour, efficient use of raw materials etc., develop the moral sense.

Another advantage is that as thought develops in relation to work, one has concrete data on which to base one's decision and therefore, one is not held up by the pros and cons of abstract thinking and one is able to take quick decisions.

The quest for knowledge being directed to a definite end—the solution of a concrete problem—it develops will power and initiative and a sense of direction in one's thinking. It develops the habit and capacity to search only relevant knowledge, which is especially important in the modern context of the explosion of knowledge, with its inevitable consequence of shifting emphasis from knowledge for knowledge's sake to relevant knowledge. For otherwise with the explosion of knowledge the students will also explode.

Seeking relevant knowledge to solve problems of daily life also provides strong motivation. Moreover, being related to daily life, the knowledge gained is automatically and frequently recalled, which fixes it in the mind, making arduous memorisation unnecessary.

Faced with real problems and seeking knowledge to solve them develops initiative, resourcefulness and problem solving capability. The continuous need to identify problems also encourages mental alertness.

As the craft is to be practised not mechanically but scientifically, where "the why and the wherefore" of every process is investigated, the educational processs develops the scientific temper. The spirit of enquiry develops. Similar explanations of similar phenomena encourages the habit of generalisation, which get further confirmed or modified by analysis of more facts and phenomena.

The joy and satisfaction of creating something useful is an added gain in education through craft. The process develops a fascination and capacity for creating new things. Working on the machine gets boring as one has to perform repetitively only a small part of the activity without any idea of the final product. Producing a whole article not only gives joy of creation, the variety of operations involved exercises various faculties in turn and thereby avoids fatigue.

Sociologically, bread labour being a moral force, education through it will lead intellectual development towards the service of man: "An intellect that is developed through the medium of socially useful labour will be an instrument of service and will not easily be led into devious paths. The latter can well be a scourge".[73] Being made the medium of education, labour will get a prestige value, which will be further enhanced by an increase in its productivity, as a result of the induction of intelligence therein, through the educational process. Gandhiji said: "Socially considered, the introduction of such practical productive work to be participated in by all the children of the nation, will tend to break down the existing barriers of prejudices between manual and intellectual workers, harmful alike for both. It will also cultivate in the only possible way, a true sense of the dignity of labour and of human solidarity—an ethical and moral gain of incalculable significance".[74]

By increasing the productivity of the village crafts and utilising the village resources in the villages themselves education will restore the prosperity of the villages, provide employment and freedom to the people in their own surroundings, and prevent thereby their exodus to the towns. That would lead to the establishment of a healthy and moral relationship between the village and the city. By reconciling the interests of the classes and those of the villages and the cities, education through crafts would usher in a juster social order. Not depending on foreign imported machinery or technical skill it will put the destiny of the masses in their own hands. He said: "My plan to impart Primary Education through the medium of village handicrafts like spinning and carding etc., is conceived as the spearhead of a silent social revolution fraught with the most far-reaching consequences. It will provide a healthy and moral basis of the relationship between the city and the village and thus go a long way towards eradicating some of the worst evils of the present social insecurity and poisoned relationship between the classes. It will check the progressive decay of our villages and lay the foundation of a juster social order in which there is no unnatural division between the 'haves' and 'have nots' and everybody is assured of a living wage and the right to freedom. And all this would be accomplished without the horrors of a bloody class war or a colossal capital expenditure as would be involved in the mechanization of a vast continent like India. Nor would it entail a helpless dependence on foreign imported machinery or technical skill. Lastly, by obviating the necessity for highly specialised talent, it will place the destiny of the masses, as it were, in their own hands".[75]

Putting the village crafts at the heart of the educational process will also teach the people the optimum utilisation of human labour and material, which is a moral and economic gain. For it is a moral principle that "human labour and material should never be used in a wasteful or unproductive way".[76]

As the crafts were to be taught scientifically and not mechanically, it will create a scientific temper, which would lead to the rationalisation of all walks of life.

Cooperatively organised productive work, self-managed, has considerable potentiality for building up leadership qualities and inculcating the team spirit, which is of no mean importance in building up democracy from the grass-roots and a decentralised economic and political order—the basis of the non-violent State.

Economically, a craft-based education will pay for itself which will enable the development of human resources on a scale otherwise unimaginable. Secondly, by freeing it from dependence on State resources, one can fully exploit its revolutionary potential for social transformation. Thirdly, such an education is an excellent preparation for assured employment at the end of the educational period. Gandhiji's idea was that a child should be taken at the age of six or seven and returned to the family at the end of his Primary Education as an earning unit. Fourthly, by improving the productivity of rural handicrafts such an education will increase the employment holding capacity of the tradional sector, which is under continuous depredations of the modern organised sector, that destroys the existing employment in the traditional sector without providing alternative employment, as itself it has very poor employment creating capacity. Fifthly, such an education is an excellent means of the upgradation of technology of the traditional sector and its easy transfer to and adoption by millions of people, resulting in tremendous increase in total national wealth production, which will solve the problem of equitable distribution also, in the very act of production itself. Sixthly, the initiative and resourcefulness developed by education through cooperatively organised and self-managed craftwork will be of immense importance in a developing country with large unidentified natural resources awaiting exploitation. Lastly, properly organised co-operative productive work builds up managerial capability, so important in economic development.

Education should be self-supporting

Perhaps the most revolutionary idea of Gandhiji was that education should be self-supporting. It was "the acid test of its reality" in the Indian situation in view of India's extreme poverty and backwardness in education. Gandhiji wrote as early as 1926: "When it is difficult for millions even to make the two ends meet, when millions are dying of starvation, it is monstrous to think of giving our relatives a costly education. . . . Is there not, may there not be, a way of each boy paying for his own education?"[77] Writing in the Harijan, Gandhiji said that "as a nation we were so backward in education that we could not hope to fulfil our obligations to the nation in that respect in a given time through the present generation, if the programme was to depend on money. He had, therefore, made bold even at the risk of losing all reputation for constructive ability, to suggest that education should be self-supporting".

The idea of self-support was attacked on two counts: education should not be self-supporting and it could not be made self-supporting. "Let no one", replied Gandhiji, "consider these economic calculations as sordid or out of place. There is nothing essentially sordid about economic calculations. True economics never militates against the highest ethical standards, just as all true ethics to be worthy of its name, must at the same time be also good economics. An economics that inculcates Mammon worship and enables the strong to amass wealth at the expense of the weak is a sordid and dismal science. It spells death. True economics, on the other hand, stands for social justice; it promotes equally the good of all, including the weakest, and is indispensable for life". "Even now", said Gandhiji, "the poor people's children automatically lend a helping hand to their parents—the feeling at the back of their minds being: 'what shall my parents eat and what shall they give me to eat if I do not work with them?' That is an education in itself".[79] The children will be taught, he said, that it was "patriotic to pay for their training through their labour".[80] A self-supporting education was the most effective way of building up self-reliance among the people, which is the only way of ending class conflict peacefully and through the efforts of the people themselves. That was also the way to build self-reliance in the country at large.

In regard to the impossibility of making education self-supporting, Gandhiji wrote the following "Surely if the State takes charge of the children between seven and fourteen and trains their bodies and minds through productive labour the public schools must be frauds and teachers idiots if they cannot become self-supporting.

"Supposing that every boy and girl works not as a machine but as an intelligent unit, taking interest in the work done under expert guidance, the corporate labour should be, say after the first year of the course, worth one anna per hour per head. For twenty-six working days of four annas per day, each child will have earned Rs. 6-8-0 per month. The only question is whether millions of children can be so profitably employed. We should be intellectual bankrupts if we cannot direct the energy of our children so as to get from them, after a year's training, one anna worth of marketable labour per hour."[81]

Spelling out his ideas more precisely stage-wise, he explained that "Primary Education extending over a period of seven years or longer", "taken as a whole can and must be self-supporting; in fact, self-support is the acid test of its reality".[82] In 1947 Gandhiji said:

> "1. All education to be true must be self-supporting, that is to say, in the end it will pay its expenses excepting the capital which will remain intact.
> 2. In it the cunning of the hand will be utilised even up to the final stage, that is to say, hands of the pupils will be skilfully working at some industry for some period during the day."[83]

Another dimension of self-support was explained by Gandhiji in connection with university education. All higher education should be need based and be run and funded by the consumer. Engineering colleges should be run by industry and commercial colleges by commerce, "Medical colleges would be attached to certified hospitals. As they are popular among moneyed men they may be expected by voluntary contributions to support medical colleges". "And agricultural colleges, to be worthy of the name, must be self-supporting", they should be attached to "self-sustained" farms. "Several private arts colleges are today self-supporting. The State would, therefore, cease to run its own."[84] "State universities should be purely examining bodies, self-supporting through the fees charged for examinations."[85] The State should not found its own universities[86] except where they "may be required for supplying State needs". Then the "State must pay for it" and "the university becomes self-supporting"[87] thereby. All other universities must be founded and funded by private organisations who want them, and "university charters" should be given liberally to any body of persons of proved worth and integrity."[88] Such a close tie-up between the consumer and supplier of manpower will ensure the required balance between demand and supply of manpower and considerably reduce the chances of redundance of highly trained manpower. It was "criminal", said Gandhiji "to pay for a training which benefits neither the nation nor the individual".[89]

Self-support was, however, not to be achieved at the cost of the quality of education but was to be its "logical corollary". Gandhiji said: "If such education is given, the direct result will be that it will be self-supporting. But the test of success is not its self-supporting character, but that the whole man has been drawn out through the teaching of the handicraft in a scientific manner. In fact, I would reject a teacher who would promise to make it self-supporting under any circumstances. The self-supporting part will be the logical corollary of the fact that the pupil has learnt the use of every one of his faculties. If a boy who works at a handicraft for three hours a day will surely earn his keep, how much more a boy who adds to the work a development of his mind and soul".[90]

Finally, if a society wanted quality education for the lowliest of the low and at the same time aspired for a non-violent order, it had no option but a self-supporting education. In his inaugural address to the 1937 Basic Education Conference, Gandhiji said: "If India has resolved to eschew violence, this system of education becomes an integral part of the discipline she has to go through. We are told that England spends millions on education. America also does so. But we forget that all that wealth is obtained through exploitation. They have reduced the art of exploitation to a science, and might well give their children the costly education they do; we cannot, will not, think in terms of exploitation, and we have no alternative but this plan of education, which is based on non-violence".[91]

The self-supporting aspect of his educational system lent so-many-sided support to his social revolution that he said in his inaugural address to the 1937 Basic Education Conference that even if there was plenty of money, self-supporting education would be a *sine qua-non* if we have to "make our boys true representatives of our culture, of our civilisation, of the true genius of our nation".

Education must revive, preserve and strengthen our villages

Gandhiji said: "We are inheritors of a rural civilisation. The vastness of our country, the vastness of the population, the situation and the climate of the country have, in my opinion, destined it for a rural civilisation. Its defects are well-known, but not one of them is irremediable. To uproot it and substitute for it an urban civilisation seems to me an impossibility, unless we are prepared by some drastic means to reduce the population from three hundred million to three, or say, even thirty. . . . We must perpetuate the present rural civilisation and endeavour to rid it of its acknowledged defects. This can be done if the youth of the country will settle down to village life".[92] Gandhiji's system of education was to build up this village mindedness in the youth and to give them the competence to improve the villages till they become worthy units of his non-violent social order.

Education an intellectual and spiritual experience

Gandhiji was highly critical of our attitude towards education, where we "care more for degrees than for knowledge",[93] which enable us to get jobs and wealth and position—and more and more of them. The majority of the students "look out for loaves and fishes".[94] "Education and knowledge are being thus prostituted and we look in vain for the peace, innocence and bliss that the life of the student ought to be."[95] Gandhiji realised and emphasised the necessity of earning one's own bread and being self-supporting. But there is a difference between that and the pursuit of mercenary motives. The former is moral, the latter Satanic. While everyone has to earn his keep, there would be no feverish search for better and better paid jobs. In regard to his expectations from basic school products he said that ". . . they would not be worried about earning money. They would be able to turn their hands to any honest work that came their way".[96]

Non-violence must permeate the whole system

The thoroughness of the dictators in preparing people for violence through their education system must be matched by us while preparing people for non-violence. He says that "We shall have to concentrate on non-violence. . . . All our problems therefore have to be solved non-violently. Our arithmetic, our science, our history will have a non-violent approach and the problems in these subjects will be coloured by non-violence. . . whereas history is a chronicle of kings and their wars, the future history will be the history of man. That can be and is only non-violent. . . . Our text-books will have also to be prepared with the same end".

Education is a life-long process

As regards the concept of life-long education, Gandhiji preceded UNESCO by nearly a quarter of a century in declaring the educational period to be "from the moment of conception to the moment of death". That the child begins to learn from the moment he is conceived and his education should be a well-directed process through the thoughts and feelings of the parents is an ancient realisation borne out by modern scientific research. Gandhiji spelt out the concept in his schemes of Pre-Basic and Adult Education, Basic Education, Post-Basic Education and University Education to be described later.

III

CONCLUSION

Gandhiji's ideas on education are inter-related, interacting and mutually supportive. Individually most of his ideas are supported in varying degrees by most modern educationists. It is, however, in the way he carries them to their logical conclusion and combines them to forge a powerful instrument for his revolutionary goals on the one hand and bring them down to earth in the context of India's rural situation that his uniqueness lies. The total effect of the combination is stunning. Simple things like crafts become dynamos of a world revolution. His ideas may be summed up as self-supporting education through rural handicrafts. Gandhiji had always attached great importance to cottage industries. But it was only when he made them the vehicle of education that they got a new meaning and content. They became the instruments of training the individual, who was of central importance to Gandhiji in bringing about his social revolution. His 'Nai Talim' would develop an all-round vigorous personality, physically and mentally alert, keenly aware of his environment and fired with the desire to improve it, and endowed with the scientific spirit, power of decision, strong will and the capacity to take initiative. Both the emotional and the intellectual life would be vigorous. Education will develop in the students the intellectual sinews and emotional reflexes required to create and preserve the social order of Gandhiji's dreams. In turn they will be able to create in the masses, the intended creators and conservers of his non-violent order, an intellectual understanding of the revolution and the emotional fervour and the dedication required to establish and preserve it. Gandhiji's system of education is also an instance of his unmatched resourcefulness. If the masses could not be distracted from their struggle for life, he made that struggle for life itself the means of their education. By making the central problems of food and clothing as Centres of Interest in a country, where the people were so poor that even God must come in the form of a rice bowl to be recognised, he provided them the strongest possible motivation for education thereby.

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FIVE

THE EDUCATIONAL IMPERATIVES: THE METHODOLOGY OF NAI TALEEM

I

THE CHALLENGE

Gandhiji's central educational aim being the harmonious development of the individual in dynamic interaction with his environment in a spirit of dedicated service, he required a life-centred, activity-centred, problem-centred and production-centred method, which would give the highest type of education to the poorest of the poor, enabling them thereby to hold their own against the tallest in the land. This seemed to be crying for the moon. Yet Gandhiji devised such a method. It is an example of his unbelievable resourcefulness, which was one of the important secrets of his success.

In his Foreword to Educational Reconstruction, Gandhiji described Basic Education as "Education through rural handicrafts". As later on he extended the idea to include all stages of education and to education both in the cities and the villages, Nai Talim—comprehending all education—could be described as "Education through rural handicrafts". The child was to ply a craft, not mechanically but scientifically, asking the 'why and wherefore' of every process involved. This would lead to the identification of the problems, to solve which, with the help of the teacher, the pupil would gain much useful knowledge of subjects, which would thereby appear not as compartmentalised information but integrated knowledge related to these problems. While the craft was the main centre of Interest round which Gandhiji would like to integrate all knowledge, ultimately all other activities pertaining to the life of the child would also come in. "For", as Gandhiji said at a meeting of the Hindustani Talimi Sangh, held at Patna on the 22nd and 23rd of April 1947, "the field of New Education (Nai Talim) is comprehensive. The pupils and teachers of the school of my conception will together have to make provision for all they need". Life could be divided broadly into three areas: the natural environment, the social environment and the economic life of the community centring round craftwork. These three areas provided the three centres of interest for the child, round which knowledge of various subjects integrate into significant units of human experience called in to help solve problems identified in these areas. These areas, however, do not represent compartmentalised units but act and interact with one another. Almost every activity has its links with the physical world, the social organisation and the world of work. This method of teaching is called the Technique of Correlation. The beauty of this method is well brought out by Saiydain as follows: "This is a psychological principle of great importance; it is based on the fact that the child's mind is an integral whole, welcoming experience as a unity, not as a collection of separate unconnected fragments. To the young child, the traditional division of the curricula into 'subjects' which are not only unrelated to one another but are also out of touch with the pulsating realities of life is often quite unintelligible. The technique of correlated teaching, on the other hand, makes the craft work of the child the starting point of his learning and, just as a powerful magnet attracts to itself scattered iron filings and introduces order and system into them, similarly the focal and expanding interests in craft activities enable the child to acquire and assimilate the relevant knowledge of history, geography, civics, general science and other important subjects. Moreover, it gives to the child's knowledge greater correctness and reality and saves it from that formal compartmentalisation which makes it both dull and meaningless. Craft thus becomes a centre from which emanate many rich and progressive human interests, some historical, some geographical, some scientific, all finding their satisfaction in due course in the specialised study of different branches of knowledge".[1]

II

THE METHOD

The various problems that the method posed and how they were solved or sought to be solved in a class-room situation were described by the author in his article in Educational India, entitled: "The Methodology of Nayee Talim", in its January, 1947 issue and would bear reproduction here. This is based on his experience as a teacher in the Sewagram Basic School—an experimental school run under Gandhiji's direct guidance.

"The educational method of Shatsky, the man in charge of the First Experiment in Russia, was the 'release of the creative energies of the children so that they individually and collectively will (would) press forward to theoretical and practical solutions of problems, acquiring 'en route' much worthwhile knowledge and skill". So with Nayee Talim. The principal objective is the solution of problems as the drawing out of strong, fine and even yarn; the cooking of a healthy, tasteful meal; etc., and even the solution gives way to, or rather is dependent upon, 'right habits of thinking, right habits in individual work, right collective habits'. It is very important to keep this perspective in view. For it dictates the whole methodology.

Practice guides Theory

"In Nayee Talim, as in the complex method, in contrast to the project method, practice precedes and guides theory. The first thing to do is to push the child into action. Give him a 'Takli'. Let him feel its problems, and seek their solution. If the child has not been already denaturalised by mishandling the teacher will soon find him coming out with a bristling array of questions. If due to mishandling the child's natural curiosity has been dulled or you want to take him to wider fields or more intricate problems than he has been accustomed to, and his imagination comes to a halt like a raw horse before a barricade, then you can stimulate it by suggestive questions. But beware that you do not kill his initiative. Your suggestions should be so clever that the child should still feel that he was the principal agent in that pioneering enterprise. Otherwise experience shows that he loses the joy of it and becomes apathetic.

When to correlate?

"A practical question comes up here as to the time of answering these questions. Should it be done immediately that a question arises in any one child's mind, and thus distract the other children from their work and their own trains of thought? For while the child is working, his mind is, or should be, actively thinking of why and wherefore of the various processes being performed. There is no doubt an advantage from the individual's point of view to receive the answer immediately a question arises in his mind. For it will give him further food for thought and fill his blank spaces—for even the most active thinker must have moments when no thought stirs up—with contemplation of the facts revealed by the teacher. Still it is impracticable in the class, and the collective loss will be much more than the individual gain. From another point of view it is better even for the individual that the teacher postpones answering his question for some time. For an interval is necessary between the arising of the question in the pupil's mind and its presentation to the teacher. It will prevent much lazy thinking, save the teacher from answering questions, put for the sake of putting them. The best way is found to be to let the class engage itself in a process in silence, each student with a pencil and paper in front of him. He can go on jotting down the questions as they arise in his mind. There is one consideration, however, which must weigh with the teacher as well as with the students. For many educational reasons the speed of work has got to be stressed and carefully measured. As stopping to put down the questions arising in the minds of the pupils would result in the lessening of speed, both the teachers and the pupils might be unwilling to do so. A way out can be found by dividing the craft period into short, but not too short, portions, giving in between short intervals of, say, five minutes, for putting down the questions arising in the minds of the students.

"This division of the period will be decided by the length of time, carefully calculated, for which the children can work at top speed. Care should, however, be taken not to stress speed to an extent that stifles thought. A clever teacher will arrive with great care at a happy compromise.

"All these questions written on chits of paper will be collected and copied down on the black-board. In free moments during the period or in the recess these questions will be working on the minds of the students and preparing them for the period of correlation. They will be reading these questions, thinking on them, and discussing them with each other, so that by the time the period for correlation arrives an atmosphere for it would have been created.

"When the period starts the questions will be taken up one by one. The name of the student who asked a particular question may be mentioned when dealing with the question asked by him. He may be even asked to stand up. This is to make him feel that it is really his game. The teacher is there only to help him.

Revision

"A great practical difficulty faces the teacher at this stage. The knowledge of various subjects not having been given in the systematic way the teacher is very often at a loss to know as to what the students already know and hence where to start from. Therefore, a very careful record of what the students have already learnt should be kept. Even then in many cases it would be wise to begin from the beginning. The repetition of knowledge already gained would not be a waste of time. On the contrary it would provide natural and excellent opportunities for revision. And as we do not believe in drill methods, such opportunities should be fully availed of. For unless great care is taken there is every danger of the impression of knowledge remaining weak.

Diaries

"All that is taught should go into an elaborately maintained diary, which should be carefully indexed. Against each subject should be noted the number of times and the dates on which it has been revised. Care should be taken that each subject gets revised at least once again within two or three months, by an intelligent selection from the changing life situations. This need not mean any mechanicality. Selection from environment will be necessary at every step and preference of one topic to another to suit the requirements of the students need imply no unnaturalness.

"Such diaries if maintained in the form of questions and answers as they arise in the class room will be invaluable. That this method of teaching is natural and evokes immediate response from the children will be seen by even a glance at the diary of a teacher who knows his job. All the processes involved in the working of a child's mind are laid bare. It is seen opening up like a flower. I happened to see one such diary. It read like a piece of literature. Again such diaries will also reveal whether the correlation has been natural or forced.

Charts, graphs and exhibition

"Besides diaries the 'investigations' of the class might be summed up in charts and graphs. Periodical exhibitions of such charts will also greatly help in fixing knowledge in the minds of the children in a very interesting way. Moreover, it will give them pride in their own achievements, and thus add to their self-confidence.

Extent of correlation

"Another problem is how far to go in correlation. For a clever teacher there is no end to the amount of knowledge that can be correlated to a particular problem. The age and previous knowledge of the children alone can decide the extent to which he should go. Only two general conditions must be fulfilled: the child's interest must not weary, and the problem in hand should not be lost sight of. The connection of the tree to the wood should be established but the tree should not be lost for the wood.

"One thing the teacher must guard against. He needs never worry about the amount of knowledge he has been able to correlate so long as his method stimulates and does not attempt to stuff his pupils with knowledge. As Rousseau says "Don't hurt him by the various sciences but give him a taste of them and the method for learning them". Other teachers who follow may be able to correlate many more things in a natural way. When the experiences of all these are pooled together and guides are prepared the amount of correlation possible will automatically increase.

Advantage of the method

"This method of education has positive advantages over the prevailing one. Firstly, this method of education avails of the child's natural instinct for activity and sets about making it more interesting by deepening its significance, thus making the process of acquisition of knowledge a game full of interest. On the other hand the ordinary method forcing the child to sit still against its nature, concentrating on books, which appear lifeless to him, incurs his hostility from the very start.

"Again, as we start with actual life situations and problems which the child is anxious to understand and solve, the thought that is born, the explanation that is given, become a part of the child's growing personality. The knowledge thus gained has a reality for the child, and he can use it for solving similar problems. His resourcefulness and spirit of enquiry develop.

"Again, the child or the adult, having seen the whole process of the deduction of thought from experiences, comes to understand the whole process of the birth of thought. Hence he develops right habits of thinking which becomes realistic and concrete and saves him from the evils of scholasticism.

"Again, as various subjects come to solve the same problem, the significance of the particular problem is deepened. One also develops a sense of the inter-relation of all knowledge and of the unity of truth. The onesided thinking of the specilalists is thereby avoided. Pestolozzi says that he who 'breaks due connection between the different branches of his knowledge destroys in himself not only the true basis of knowledge, but the very end of such a basis (the development of 'the forces of humanity') and becomes incapable of appreciating the advantages of truth'. For the growth of an all-round personality the imparting of integrated knowledge is essential.

"The child also develops self-confidence, being the principal agent in the solution of problems facing him.

"The method will be, moreover, quicker. Every one knows how painfully knowledge is 'learnt up', how painfully it is kept there, and how quickly it is lost—the useless toil leaving a bad taste in the mouth in the bargain, curing one of all love of knowledge for ever. Now it is a common experience that the time for which a thing will stick in the mind depends upon the strength of the first impression. In Nayee Talim the first impression is bound to be very strong as the thought is slowly and carefully traced right from its foundations in concrete life. Again, as the situations to which knowledge is correlated are of everyday occurrence, an unconscious and automatic revision of the thoughts arising from them is going on in the mind. This makes knowledge difficult to forget. Therefore, if only we teach the boy the habit of thinking on his work we have set him on the path of sound knowledge.

"The method of teaching involved in 'Nayee Talim' is in agreement with the most modern researches in the field of education. But its supreme virtue is that Gandhiji has brought the fruits of those labours within the grasp of the poorest in the land".

The main issue which raised very heated controversy was the amount of knowledge that could be correlated in a natural way. For, this was common ground among all that correlation should never be forced. After reviewing the work done during the first two years, the first Basic National Education Conference resolved that "correlation should not . . . be unnecessarily forced, and teaching should be correlated not only to the basic craft but also to the child's physical and social environments, which offer equally rich possibilities for this purpose and enrich the children's basic knowledge profitably".[2] It almost appears as if the social and physical environments were brought into increase the possibility of imparting correlated knowledge which reflected the doubts of even some close associates of Gandhiji about the capacity of the basic craft to provide full opportunities for imparting knowledge. Therefore, one often heard even from men like Dr. Zakir Hussain and Kishorelal Mushruwala that while we should correlate knowledge with craft "as far as possible".[3] "other matters in the above subjects (which cannot be so correlated) will not be omitted".[4] At the Wardha Conference Dr. Zakir Hussain said: ". . . there may be some aspects of a subject which cannot be taught through the *takli*. Shall we leave them out altogether? No. We shall teach through the *takli* as much of these subjects as possible. The rest we must not leave untouched".[5] Gandhiji, while he did not oppose this view and did not want to discourage an experimental and cautious approach, himself was of the view that the possibilities of correlated teaching through the craft were considerably more than could be visualised at the moment: ". . . it is true that I have said that all instruction must be linked with some basic craft. When you are imparting knowledge to a child of 7 or 10 through the medium of an industry, you should, to begin with, exclude all those subjects which cannot be linked with the craft. By doing so from day to day, you will discover ways and means of linking with the craft many things which you had excluded in the beginning. You will save your own energy and the pupil's if you follow this policy of exclusion to begin with".[6] The teachers would also find that in the end they would have included many things which they had earlier excluded, that all that was worth including had been included and that whatever they were obliged to exclude till the end was often something very superficial indeed.[7] Gandhiji was not averse to exploiting the possibilities of correlated teaching in the social and natural environment, apart from craft, but he wanted to concentrate on craft for the many dimensional gains that would accrue thereform—the economic and social gains without in any way sacrificing the educational.

It was for this reason that he wanted to concentrate on a single craft rather than on a number of crafts, as advocated by others for 'educational reasons'. The uniqueness of his method lay in selecting a single operation, capable of yielding multiple results, and concentrating thereon. The Kher Committee was of the view that "in the lower classes (to the age of about 10+) there should be no single basic craft but that the various forms of activity should serve as a preparation for and develop into, a productive basic craft in the higher classes".[8] "To prescribe one basic craft", they argued, "in the lowest class of a school which children of the age of about 6 may join is educationally unwise. The activities in these classes arise from the child's interests and desires and should not be forced on him by the adult. Any activity which appeals to a child's interest is suitable as long as it makes a demand on a boy's skill, judgement, sense of observation and power of calculation and combines all or some of these in a constructive effort to achieve an end which he himself wishes to achieve. . . . As the child becomes older his interests change. Many of them become less transitory and can be satisfied through one basic craft in which the pupils should reach a high degree of skill. Such crafts as agriculture, weaving, wood-work, metal work provide facilities for educational development, appeal to the growing child's sense of making and doing something, increase his self-respect since the produce of his labour has a marketable value and tend to remove the false idea that manual work is objectionable".[9] The Committee was obviously not thinking of the economic feasibility of providing so many crafts and activities in a village school and of the question of self-support. Gandhiji thought of this and in addition thought of the educational advantage of concentrating on one craft. Nor would it be boring. For, says Gandhiji, "There will be newness in every lesson just as there can be new music on the same instrument. By changing over from one craft to another a child tends to become like a monkey jumping from branch to branch with abode nowhere".[10]

III

SOME ILLUSTRATIVE LESSONS

The immense possibilities of correlating subject knowledge to the *takli* were examined by the author in an article[11], which is reproduced below:

Intellectual content of the Takli

"An Education Officer of the Government of India writes in reference to my last article in the 'Harijan' entitled" 'Work as Education'.

'What I am anxious to know is how the boys in question learnt their geography, history, languages, mathematics, etc., through carding, spinning and weaving'.

"This is by no means only the officer's difficulty. Every time a visitor, whether he be an educationist or a layman, comes to our institution, it is the first and very often the only question he invariably asks.

"The question seems to betray bookish pre-occupation. Do they regard the imparting of knowledge of these subjects as the alpha and omega of education? Hardly anybody seems even to suspect that craft may be teaching something much more important than these subjects. The aim of education is not to stuff the student with the knowledge of the 'respectable' subjects but stimulate his various faculties and enable him to seek the path of right living. In this process knowledge comes as an aid. But it is only an aid, never the end. Even then, it is not the amount of knowledge that matters, it is its quality, the way in which it is imparted. The right method of imparting knowledge, I have already dealt with in an article entitled 'Methodology of Nai Talim' published in the January, 1947 issue of 'Educational India'.

"The above question also implies scepticism about the potentialities of correlation in craft work, so long the pre-occupation solely of the lowest and the most uneducated classes. A doubt naturally arises in the mind: How can such things be the means of the highest education? This doubt, I hope, will disappear after the following account of the subjects that can be taught through the 'Takli', which is one of the simplest instruments, consisting only of an iron spindle and a brass disc used for spinning. I shall proceed subject by subject, and show how through this insignificant little instrument we can enter the 'Penetralium of the Mystery' in each case.

Language

"I shall first deal with language. Language consists of words and sentences which denote things and actions. They obviously are involved in any process. The advantage of learning them in connection with craft work that is actually done is that having a basis in the child's concrete experience they get more firmly fixed in the child's mind.

Arithmetic and Geometry

"Arithmetic and Geometry come next. Numbers and the Four Simple Rules automatically come in when there are a number of 'taklis' distributed among a number of children. In connection with the problem as to what should be the shape of the cardboard piece on which the 'takli' revolves, and as to why the 'takli' should revolve in the centre of that piece, we can teach: What is an angle? What are acute, obtuse and right angles? The definitions of point, line, perpendicular and diagonals come in. We can learn how to find the area of a rectangle, the area of a right-angled, an obtuse-angled and an acute-angled triangle, and other allied problems. In connection with the construction and nature of the iron rod we can learn definitions of point, line, axis, cylinder, cross-section, circle; and the method of finding the volume of a cylinder. Thought on the circular nature of the disc and the rod brings us to the definition of curve, sector and tangent and to the method of finding the area and circumference of a circle involving fractions. The study of the box in which the 'takli' is kept leads us to the study of the method for finding the volume of a cuboid, the solid matter in a hollow cuboid, etc. The question of the shape of the cone of yarn leads us to study as to how to find the area of the curved surface of a cone and its volume.

Physics

"Let us now take Physics—a sufficiently frightening name to simple village folk. The fact that the 'takli' is a small machine leads us to the definitions of 'Machine' and 'Mechanics.' 'How does a 'takli' revolve? This question leads us to study Newton's First Law of Motion, definitions of

Matter and Force, the three factors involved in Force, representation of Force, Speed and Velocity, Centripetal and Centrifugal Forces, Motion—linear and circular, the measurements of these two forms of Motion, and the Moment of a Couple. Why does a 'takli' stop? In answering this we come across Newton's Law of Gravitation, Parallel Forces and their Resultant, Axis; Action and Reaction of the surface of the earth—Newton's Third Law of Motion, Acceleration and Retardation (in connection with changing speed) and their representation; Momentum and change of Momentum—Newton's Second Law of Motion; and Elasticity (in connection with the tendency of the fibres to unwind themselves).

"Again the search for the reasons as to why the 'takli' does not fall down while revolving leads us to the realm of Equilibrium—stable and unstable, and the Centre of Gravity. The reason for the circular nature of the disc and the cylindrical nature of the rod leads us to study Friction and Newton's Second Law of Motion. The answer as to why the disc is heavy brings in Momentum and Newton's First Law of Motion. Elasticity comes in when we ask ourselves why the rod is of iron while the piece on which the 'takli' revolves is made of cardboard. Study of the relation of the weight and volume of the rod, of the brass disc, and of the 'takli' as a whole leads us to definitions of Mass, Weight, Density and Specific Gravity; and to the method of finding out Specific Gravity and Principle of Archimedes.

Chemistry

"Nor is Chemistry too sacrosanct for the depredations of the little 'takli'. The rod is made of iron. The disc is made of brass, an alloy of copper and zinc. Definitions of elements, mixtures and compounds, naturally come in. So do definitions of metals and non-metals and the properties of the three metals mentioned above. Why does the rod rust? The question leads us to study Oxidation, Chemical and Physical changes, Elements and Compounds, Atoms and Molecules, and formulae of Compounds. What is the greenish thing formed on the brass disc? This brings us to Hydrogen Sulphide and its action on copper. A rough idea of the manufacture of the metals mentioned above can, of course, be given in this connection.

Geography

"The natural desire to know the places in the world, and especially in India, where the above metals are found, brings us to the realm of Geography. Again the query as to where the different types of the 'takli' are or were found brings us to the geographical location of many places.

Economics, History and Sociology

"Economics, History and Sociology also come in to help us in understanding the problems of this little but mighty instrument. The question naturally arises as to why we use the 'takli' and other simple instruments when we can command the service of huge factories. Again, why do we prefer the 'takli' even to the spinning wheel? These questions stimulate us to think over the extreme poverty of the country, exploitation of the weaker nations by the imperialist countries, the incompatibility of universal democracy and individual freedom with the industrialization of the whole world, the economics of decentralization and self-sufficiency, and hence the necessity of cheap and simple methods of production. The 'takli' is to be preferred to the spinning wheel for it is simpler, cheaper and hence can reach the millions much more easily. Again, the study of the materials used in the 'takli' naturally leads one to find out the economic position of India regarding the metals used, the trade in these metals and its economics. The history of the 'takli', its changing forms, its survival in Bihar and other places, would by themselves form an interesting chapter. Again, many lessons in practical sociology such as cleanliness, time-sense, co-operation, etc., can be given through craft work as explained in my last article 'Work as Education', referred to above.

Physiology

"Physiology comes in when we study the various postures or 'Asans' taken up in plying the 'takli'. In order to find out the most convenient 'asan' we must study the form which the skeleton adopts in each 'asan'. The different positions of the leg and the arm muscles will also come in, and along with it their structure and manner of movement. Again, spinning involves the coordination of various muscles, which brings us to nerve-control. Reflex action and its seat, the Spinal Cord, explain the common phenomenon of automatic spinning after some practice. The problem as to how to look at the thread being drawn out without injuring the eye leads us to study the structure of the eye, refraction, effect of winking, etc.

Psychology comes in when we study the effect on the mind of the rhythm and harmony involved in spinning, spinning as occupational therapy, and effects of the disturbance of the mind on the thread and vice-versa. Training of the mind through the proper organization of craft work brings us to the realm of applied psychology. Again, psychology of group spinning opens out other interesting fields for study.

The above by no means exhausts the richness of the magical thing called the 'takli' which we have been accustomed to look down upon with contempt. It is, however sufficient, to indicate that we can enter the realm of the highest education through the medium of the craft of cloth production, especially if it is taken in its entirety from the production of raw cotton to the finished cloth".

This article provoked a strong reaction, which was explained and answered in another article.[12] As it throws some additional light on the methodology of Nai Talim, it is reproduced below:

Danger signals

"I have read your correspondent's strictures on my article on the *takli*.

"In the famous Whistler-Ruskin controversy, the Counsel for Ruskin remarked that surely Mr. Ruskin knew. He had spent his life-time among pictures. Whistler retorted that by that standard the sentinel in the Art Gallery must be the finest critic. The fact, therefore, that even 'a spinner of long standing' should have the 'shock of my (his) life' at the 'arrogant' attributions to the *takli*, is no argument against what I have written. It is, however, significant. It betrays the contempt, based on prejudice and ignorance, with which crafts are regarded. And to regard crafts only as a means of putting a few copers in the hands of the poor, having perhaps also some moral values, grudgingly assumed, appears to me as nothing less than contempt for them. As such the crafts could not be what Gandhiji would have us believe, the dynamic centres of a non-violent social order. The problem before Gandhiji was how to so utilize the common, inescapable life of the masses as to make a dynamic nation which would not only overthrow the mightiest imperialist power, but also show to the warweary world a way of justice, peace and hapiness—the way to Rama Rajya, as he would put it. His answer was Nayee Talim. Nai Taleem teaches us so to live the 'inescapable life' as to discover it and to discover ourselves in the process. The way to live thus is to turn the eye of wonder, investigation and discovery on things we cannot escape from. Clothes we all must have. If we produce them ourselves, and keep a scientist's eye open while we produce them we not only clothe ourselves more effectively, 'the why and wherefore' of things also leads us into the haloed realms of knowledge. And this also more effectively. Current education, which calls for intellectual exercise only in the study room or the laboratory is not so effective as this constant watch on the little common things of life in creating that spirit of observation and inquiry which leads to discovery, invention and progress. The usual sloppiness and unawareness of everyday life of the scholar is proverbial.

"The correspondent seems to be a man of education so called. He has been playing the *takli* for a long time and yet, obviously, he has never asked himself: Why the *takli* rotates? Why does it fall? Why is the disc circular? Why is the rod circular? What is the radius of the disc? What is the diameter of the rod. And a host of simple questions which are bound to arise in any mind with even a grain of curiosity. The answers to them would have brought in all those things, which the correspondent calls 'sentimental nonsense', so naturally that they would not have taken away his breath away except for wonder: how much knowledge lay before him just to be noticed! Wordsworth's lines:

"To me the meanest flower that blows can give
Thoughts that do often lie too deep for tears"

show the deep penetration of a mind which had drunk deep at the fount of life. Most minds trained in contact with life develop something of this penetration. Knowledge has been derived from life and yet our reaction to the concept of basic education would imply that life directly observed could not give knowledge. *Takli* is a solid. Why should it take anybody's breath away if someone says that it has the geometry of solids, their physical and chemical properties? It rotates. Why should it be shocking to hear that it obeys the laws of motion? It is a means of producing cloth which consumes a fair part of the income of the toiling millions who constitute the sub-continent of India. It is most natural that any mind worth the name should enter the sacred realm of economics in connection with this simple instrument.

"The violent reaction of the correspondent to the most obvious fact of Basic Education should be regarded as a danger signal by the leaders of the experiment. It shows the colossal ignorance which prevails about the richest gift, *Nayee Taleem*, the Father of the Nation has given the country. Books containing instructions in the manner suggested in my article in question should be written out in full. Things will have to be made fool proof, it seems, before we can carry the country with us".

Apart from the technique of correlation, another problem is the organisation of activities in a manner as would maximally exploit their educational potential. Two examples are quoted to illustrate the manner in which they were organised in the Sewagram Basic School. The account of these experiments was published by the author in 'Harijan' in two articles: 'Work as Education'[13] and 'Revolution through the Broom'.[14]

Work as education

" 'Work is or can be a very powerful educational factor'. (The Christian News-letter of August 8, 1945, under the caption 'War and the School'.)

This is what Gandhiji has always been saying. By now a majority of those who have cared to think over the problem have no hesitation in admitting that education through work, meaning correlating knowledge to work, is the best way of imparting it. But perhaps few will be prepared to find that work itself, without a word of correlated knowledge, is education, and education of a high order. We had a chance of trying this out, in the Sewagram Basic School, with the seventh grade boys. It should be remembered that the experiment was confined to the cotton processes required in spinning and weaving. The stress and storm through which the country passed after 9th August 1942, the fact that the present batch was the first undergoing training under the basic scheme, and constantly changing teachers had left the boys in an almost wild state. As the material was raw, the effects of training under efficient and scientific supervision were bound to be more pronounced. Again, fortunately we were in a hurry to find out the standard reached by these students in the various processes, from the cleaning of cotton to the manufacture of cloth, so that we might be able to plan for their post-basic studies. So practically for nearly five hours daily, the boys were doing pure craft-work, under what may be called factory conditions, i.e., keyed up to produce their maximum. The word 'factory' need not shock any one, for educationally the experiment proved a success.

Economically the result may be summed up as given in tabular form on the succeeding page.

"These figures need no comment. In a country where the per capita income is only a few annas a day, a child of fourteen earning 1 anna (or nearly 1 anna) per hour is certainly revolutionary. Thus, spinning can and should become a subsidiary industry for the agriculturist in periods of enforced idleness.

"So far about the economic aspect. This result would have been of no value, if it did not mean also education, i.e., improvement of the mind. The educational results were more surprising. We were afraid lest by making them work for five or six hours a day, without correlating any recognised form of knowledge, we might just be 'slave-driving' the children. Really speaking, however, there should have been no such fear. Our experience amply bore out that the 'insignificant' processes of

Student	Measurement of cloth produced	Punjam*	Hours taken from the cleaning of cotton to the manufacture of cloth	Rate of income per hr.
Madhu	8 yds. × 32″	13	138	0-0-11
Ganpat	8 yds. × 32″	13	123	0-0-1
Bakaram	8½ yds. × 36″	13	117	0-1-2
Gopal	8½ yds. × 27″	9	127	0-0-9
Hari	8 yds. × 32″	13	135	0-1-0
Atmaram	8 yds. × 32″	10½	115	0-0-11
Vaman	8½ yds. × 27″	19	102	0-0-11

* An Indian measure for the closeness of the texture.

Note 1. In calculating the time taken, there has been a departure from current practice. If three boys, say, have done sizing, then the time taken to do it has been trebled when calculating man hours. Usually the time taken by those who help in the process is not taken into account.

2. From the price of the cloth produced, calculated at the A.I.S.A. rates, the price of cotton was deducted. The rest was all regarded as the income of the children.

cotton cleaning, ginning, carding, spinning, etc., were full of immense educational possibilities.

Punctuality and a sense of time were the first things stressed, and they were enforced with the utmost vigilence. The timepiece was always in front of the boys, and they were taught to have the eye always fixed on this indicator of fleeing time. An accurate record was kept of the time when a piece of work was begun, when it was stopped, when it was interrupted. The relation of time to speed, etc., was noted. It was found how lazy we were apt to become when we had no record of time in minutes or even in seconds. The boys themselves again and again saw the advantage of always keeping it in front of them. One of them said one day as he was happily and swiftly playing his wheel: 'It is the first time that we have learnt the value of time'. Those who know the village life and our want of time sense, would not be surprised at the remark.

"Again, it was found that unless one was alert and worked with full concentration, production declined considerably. As talking during work was stopped, the production curve immediately went up. But simple concentration is not enough. One has to be constantly on the alert for any defect in the tools used or in the manner of carrying out the process which must be immediately remedied. Lazily allowing the ginning machine to creak on through absence of oiling or through some cotton seeds being caught between the rollers, may straightway reduce production by half. Again, one has constantly to be thinking how best to prevent waste and promote cleanliness of work. Take the simplest process, that of cotton cleaning. The first day the average speed of the class was 6 tolas per hour, because the boys lazily and 'happily' talked on during the work. Talking during lesson hours is prohibited everywhere. This was lesson time. Talking was stopped and the output went up. We had to think out what extraneous matter or dirt should be removed from good cotton before carding and what would automatically be removed by carding, how to hold the cotton pod so that its fibres did not get pressed together, which would later make both ginning and carding very difficult, how to pull out extraneous matter and raw fibres, so that the largest number were pulled out at one and the same time, and without bringing along with them good fibres, how to place uncleaned cotton, cleaned cotton and cotton waste, so that the minimum time was taken to pick up uncleaned cotton, pull out the extraneous matter and drop both the refuse and cleaned cotton in their respective places in the quickest manner.

"And to do all this in such a way that the whole place looked clean. In this way, this insignificant process, so far entrusted to ignorant women labourers for a pittance, was able to teach the boys to do some hard thinking, inculcate on them a sense and value of time, resourcefulness, cleanliness, economy, art of arrangement and last but not least, an eye for detail. 'These are small things', said Gandhiji once. 'But big things evolve from small things. An eye for detail is absolutely essential and it is our duty as educationists to develop it in the children'.

"The other processes provided equally good opportunities for inculcating the above-mentioned qualities on the children.

they had, however, also their own special contribution to make. Carding provides an excellent lesson in rhythm and muscle coordination, especially when done by the Bihar method. Moreover, those who have an experience of carding know what a lesson in discipline it is to teach a boy as he comes out of the carding class, a very sheep of a boy, all covered over with cotton wool, to clean himself thoroughly before entering another class-room. Spinning develops sensitiveness of fingers and coordination of the two hands and the eye. Weaving very often, infinite patience.

"The educational value of the other activities during these days were also fully exploited. Take cleaning, for instance. The boy who was deputed to clean the room, was given half an hour every day. He had not only to clean the class-room with its walls, its corners, its roof, etc., but also to understand that the surroundings, of which it was a part, must also be cleaned, and the work was examined with as much care and minuteness as a scientific experiment. In this way our habits of cleaning our own house and throwing the refuse in front of our neighbour's, was sought to be remedied, and a sense of neighbourliness sought to be developed in these future citizens of rural India. Again, arranging 'asans'[15] every day in new styles to suit the particular process in hand, provided good lessons in neatness and method.

"But perhaps the most important lesson that was sought to be taught was that of co-operation. It is a lesson badly needed for reconstructing our villages and is one that can only be learnt through work. Work in the class-room was so arranged as to give the boys the sense that they would all sink or swim together, and it is surprising, how many opportunities for inculcating the spirit of co-operation can be found in that little world called the class-room where tuition consists in doing corporate work.

"Within two months, the boys showed marked improvement in their general behaviour, which was visible to the whole Talimi Sangh Community who had doubted the success of the experiment. The boys had become better disciplined and had done their work with great enthusiasm and joy. It was with pride that they finally brought in their pieces of hand woven Khadi.

"We discovered that there was no conflict between the economic and the educational aspects. The close relationship between work and character was firmly established by various graphs, both individual and collective, which were elaborately maintained. The graphs showed steadily ascending curves. The improvement in production may be seen by the following figures,'for example (Refer to the Table on the succeeding page).

"This increased production in itself would be no demonstration of the success of the education through work but for the increased mental capacity of the pupils observed and narrated in the foregoing paragraphs. The distinction between the workshop and a school-room where tuition is given through work consists in the fact that in the workshop the apprentice works mechanically and slaves at only a part of the work turned out, no regard being paid to his mental growth, in the school-room every pupil learns all the processes, not mechanically but organically, so that the full capacity of the man in him or her is drawn [out at a given stage. Looked at thus, the measure of increase in each pupil's work is the measure of progress in education.

"There was a time when we were afraid of our schools being called workshops. But we are no longer afraid of that name. Only our schools will be both economically more productive and educationally more instructive. It would be a happy day when we can plant one such 'workshop' in every one of India's villages".

*Revolution through the Broom**[16]

"Gandhiji has conceived of Nayee Talim 'as the spearhead of a silent social revolution fraught with the far-reaching consequences'. One of his mighty weapons for this revolution is the broom. We begin the day in Sewagram with half an hour of community cleaning in which almost the entire resident community of about a hundred and fiftly persons takes part. The work ranges from the cleaning of urinals and latrines to the sweeping of roads and compounds. To the newly arrived

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* This article was written in September 1946, after 3 months of work as in-charge of community cleaning. It was, however only recently polished up.

Cotton Cleaning		Ginning		Spinning	
Date	Average speed per hour	Date	Average speed per hour	Date	Average speed per hour
9-1-46	6 tolas[2]	9-1-46	40 tolas	18-2-46	262 tars[3]
12-1-46	14 ,,	11-1-46	44 ,,	21-2-46	306 ,,
13-1-46	21 ,,	12-1-46	63 ,,	22-2-46	316 ,,
17-1-46	42 ,,	16-1-46	72 ,,	25-2-46	328 ,,
18-1-46	69 ,,	21-1-46	104 ,,	28-2-46	340 ,,
				4-3-46	345 ,,
				22-3-46	365 ,,

[2] 5 tolas=1 chatak; 1 chatak=2 oz. nearly.

[3] 1 tar=4 feet.

students of the Training College it was a nasty experience to have to attend to the disposal of urine and night-soil every morning and to spoil the fine fresh air of the morning hours by clouds of dust. And then it seemed so unnecessary! There were the 'bhangis' to do all this. The students would not accept, at least emotionally, the simple fact that it was their duty to clean the dirt for which they were responsible. It took them considerable time and no small effort to emerge from the birth pangs of the new social attitudes, if they can be said to have done so completely even now. But after three months of work we seem to be well on the way.

Auto-organization

"This entire corporate activity is self-directed. Though the final charge lies in the hands of a member of the staff, the students of the Training College as well as of the Basic School have their own elected ministers, whom the staff member guides and on whom the staff member throws more and more responsibility as the year proceeds and the newcomers get accustomed to our way of life.

Survey

"Before starting, a survey of the work to be done had to be carried out. It was divided into two categories: recurring and non-recurring. The first was done every day. The second needed only occasional attention and included mostly the many 'black spots' in our locality. A stock of the equipment at our disposal was also taken.

Distribution of work

"Then came the most difficult part of the job. Distribution of work among nearly 150 persons of different types and of all ages, with vast temperamental and intellectual differences, was not easy. The period under consideration was an experimental one in which certain principles were applied, tested and revised in the light of experience.

Planning

"The following principles were observed as far as possible:

1. None should be given more work than his or her physical capacity could bear.
2. An attempt was made to see that nobody was left out. For that, it was found necessary to keep a list of the total strength of the available manpower, ready at hand. The grade of each pupil was also noted against his name. Other duties to which some people attended at the time of community cleaning were also kept in view.
3. The children were grouped together with the students of the Training College to exploit the imitative instinct of the child. It gave the Training College students an opportunity for handling children at work and thus provided them with excellent lessons in practical teaching, as Basic Education was education through work. As the Training College students were new and the children alone knew the work, they were made leaders of the various groups. The children took up their duties with confidence and gave orders to the elders which appeared sometimes arrogant to them. Then a worse thing happened. The elders were lazy in the beginning. The children took their clue from them, and started coming late and neglecting their duty. They were being swamped by the new-comers. So the two have been separated and the result has been good. Perhaps the stage of association will come a little later. A social architect has continually to feel the pulse of society and change his remedy as often as the symptoms dictate.
4. Inter-provincial grouping could not be consciously adopted at this stage, because of certain difficulties. But still province rubbed shoulders with province. It was unfortunate that English formed the medium of conversation among many. But those who were free from the handicap of knowing English were forced to resort to all sorts of primitive devices: gesticulation,

use of key words picked up, etc., and soon learnt the language of one another sufficiently to make themselves understood. The children, not knowing English, acted as a catalytic agent. The fact that a large number of English-knowing and English-speaking people, who were proud too of their knowledge of English, were put under children whose instructions they were not able to follow, due to the language difficulty, provided many opportunities for amusement. Gulliver was in Lilliput.

5. Similarly we were not able to group men and women together for various reasons; and hence another opportunity of studying group activity containing different types, and of attempting to create right attitudes, was missed.
6. In grouping, first of all, the attempt was made to divide the work into separately recognizable units and estimating the number of persons each unit would require. These were varied in the light of later experience. Later, however, this method was given up and it was found that it was much more convenient and economical to divide the whole work into nearly equal units and allot to each the same number of persons. When the duties have to be changed one has just to rotate the circle by one point and the duties of all the groups automatically get changed. This system of grouping and rotation had the advantages of allowing sufficient time for people in a group to develop the group spirit. A proper rotation of duties is very essential. It prevents fatigue through monotony, avails of the enthusiasm for a new venture and gives an opportunity to learn all the different types of work that are there. But care should be taken to see that the period for which one is on a particular duty is not too small for him to get familiar with it.
7. It was felt that the theoretical plan should be carefully made and strictly adhered to. But in order to be able to do so it was found very necessary to make an intelligent anticipation of likely interference with the

plan, especially due to the programmes of other departments. Co-ordination of the activities of various departments was found to be, as usual, the most difficult part of the job. Mostly duties used to be changed after a week. Every Thursday, therefore, we were found poring over the lists relating to cleaning work and kitchen work—the kitchen being the department with which our plans most often clashed. The tentative lists were then shown to the incharge of kitchen work, the incharge of the ladies' section, the incharge of children, and others for suggesting necessary changes.

"In the theoretical plan, however, there should be an element of elasticity. For life is changing, and as a Basic School reflects life, there must be room for change in the plan also. For this purpose manpower was divided into two parts. In one the number of men and the equipment they would require was fixed. This group performed daily recurring duties. The second was reserved for meeting the changing needs of the community. They were called the Reserve Squad. The Reserve Squad also accommodated manpower released from elsewhere or newcomers whose names had not been included in the regular list.

8. Again here, as in any large scale organization, unity of control was found to be absolutely essential. So was strict discipline. As it could only be based in our case on non-violence and self-discipline, it was a matter of slow growth.

Equipment

"A word about equipment. Before starting work an intelligent anticipation of the demands of various groups was made, and sufficient equipment was collected. For, nothing is so demoralizing as lack of equipment. A list of equipment allotted to various group put up at the place of distribution is very helpful.

Execution

"After the plan had been prepared, the next task was to let everybody know about it before it was put into operation. It is by no means an easy thing where such a large number of people, including children of all ages, are involved. Copies of the list containing the assignment of duties were put up well beforehand in the school, the hostels and other places of gathering.

"Just before the work started the person responsible for distributing equipment went and placed the requirement of each group in front of the signboard bearing its names. Then everybody would come, pick up the equipment and after the work was finished put it back there to be checked by the person concerned with the collection of equipment. The question of instruments is the most difficult part of the job and the manner of distribution will have to be adjusted to suit the type of persons at any place. But considerable difficulty will be avoided if only the captain of each group takes and returns the equipment. Then the person responsible for distribution knows where to fix responsibility when anything is found missing or damaged.

"The work having started, the assistants of the ministers[17] for cleanliness went about watching, noting the various difficulties encountered and collecting data, especially with a view to economizing manpower and equipment, without which work would cease to be educational. After a day or two the ministers and their assistants sat together to discuss things and made necessary changes in the theoretical plan, which were announced to the persons concerned. These meetings of the 'Safai Cabinet' should be as frequent as possible to discuss matters with a view to keep up continued improvement.

"Again the staff member in-charge, with the help of his assistants, used to be on the look-out for capable, enthusiastic persons, whom he tried to put in key positions. They acted as dynamic centres to get the whole mass moving. To some extent reliable data was also collected through them.

"The attempt to work out units for each kind of work for its easy measurement and comparison with other types of work has not yet been made. Regular exhibition of the records of work done in terms of comparable units can be a powerful means of indirectly stimulating those who are accustomed to work carelessly and slowly. Graphs again can be a good index of the progress of work, the change in the psychology of the pupils and their efficiency.

"Three months of community cleaning have convinced us that the broom can be made a powerful means in the moulding of a new society. It was a corporate, self-directed activity involving a large number of persons of both sexes, of all ages, and of vastly different temperaments and intellectual attainments—a community complete by itself, hence providing excellent lessons in democracy, group activity and organization. Again, as the community did all kinds of work by itself, including even the cleaning of its own latrines, it learnt through living, self-help and the correcting of an age-long wrong against the Harijans. Moreover, as intelligent and educated people turned their attention to the 'dirtiest' work, whose wrong handling had been an age-long national nuisance, the methods of work improved. Many suggestions came forward for the clean and profitable disposal of nightsoil, urine, etc., though we were not able to adopt all of them. Even from the individual's 'selfish' point of view the activity was a positive gain. The turning of attention to his immediate environment stimulated the spirit of minute observation and experimentation, the twin indispensable instruments for the evolution of a dynamic personality."

Another class lesson which would illustrate the method as actually operationalised is given below. It appeared in the Harijan as "Propping up Jawari".[18]

Propping up 'Jawari'*

"We woke up to a thickly covered December sky. Shri Aryanayakam, the Secretary of the Hindustani Talimi Sangh and the head of the institution at Sewagram, lost no time in gauging the situation. Many *jawari* plants had been laid low by the rain. The threatened shower would destroy them permanently. The call of life sent the previously fixed programme by the board, and immediately after breakfast fields were humming with young voices busily propping up fallen plants.

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* This is the account of a lesson given to student of the 7th Grade in the Sewagram Basic School.

"I also took my class to our allotted field. Its shape was a rectangle beside a right-angled triangle. The various sides were measured and put down on the board placed by the side of the field, and the area of the field calculated. The distance between two plants was measured, and the number of plants found out. We knew the time at our disposal, and so the target for each boy was fixed.

"Obviously, the above gave us the opportunity to revise methods of measuring distances and area calculation, the Four Simple Rules of Arithemetic, the Unitary Method, the Rule of Three, etc., and at the same time it taught the boys the habit and appreciation of the advantages of pre-planning and division of labour—that is, it taught them the principles of efficient work.

"The boys stood in one row and proceeded straight to the opposite side, each looking to the plants in the rows entrusted to him. They were village boys, so they knew what they had to do. I also had my own rows to look after to provide the children with the example of hard and efficient work. Only now and then I had to abandon my line to restrain some restive child or to stimulate observation by frequently exchanging remarks with the students. The stems had grown very tall but the ears of the corn were very small. Why? A number of plants had to be tied together. Why? Green *jawari* is a delicacy for the villager. Many boys stole some stems of corn. Others reported against them. That provided me with an opportunity of giving them the definition of stealing, and the social and individual dirt it involved. They also learnt that true friendship did not mean hiding each other's faults. Reporting could, however, be justified only if done in a friendly spirit and only after duly warning the person concerned. Otherwise, picking holes in others was an unedifying task. It created pride in oneself and irritated instead of reforming the other party.

"The way each student worked provided me with an index of his mood and character: the quickness with which he selected the right plants to be tied together, the neatness with which he tied them, the steadiness with which he worked, etc.

"At the stroke of the bell the boys came and indicated the number of plants each had propped up to the Class Minister (Varg Mantri) who noted it down in his register.

"In the afternoon they had to forego their rest and finish the work that had been left unfinished due to the laziness and irresponsibility of some of their comrades. In society all had to suffer for the sins of a few—a price that man had to pay for his gregarious instinct.

"Afterwards we retired to the class room (the scarcity of shady trees in Sewagram makes them necessary) to elaborate the various lessons learnt in the field. The boys were told to ask questions about their work in morning. Those were noted down.

"The question of plant-feeding brought in the earth, the sun and the air and that of food absorption brought in capillary action. The question of manure brought in its train the composition and decomposition of human and animal excreta, refuse, etc. Definitions of elements, compounds, chemical action, came in, Nitrogen, Oxygen, Carbon dioxide, etc., had to be explained. The similarity and connection of human life and plant life bound together in one cycle was also brought home to the children. The question of overgrown stems and small ears of corn led to the explanation: the field was on the site of trench latrines, so the plants got too much food in the beginning. By the time they grew the ears of corn the food had become exhausted. In the case of trees the exhaustion did not take place because the roots of trees went much deeper and were spread out over a much wider area. The ugliness of small ears of corn at the end of such long stems brought in the question of proportion as an essential of beauty.

"The plants were kept at a fixed distance from each other so that each could have enough food without encroaching upon the 'private' property of its neighbour. All plants were given equal space to grow. In human society some had too much and some too little. That was why the Communists believed in equal distribution with slight variations necessitated by the variations of life.

"When a fallen plant was made to stand erect it had a tendency to fall back in its old direction. When, however, it was tied to another plant with the tendency to fall in the opposite direction, the 'actions' and 'reactions' of the two neutralized each other. So students got the idea of force and the equilibrium of forces.

"Singly the plants had fallen down, but when tied together they regained the strength to stand up. It was similarly true of human life. 'United we stand, divided we fall'. Indian history and histories of the other countries of the world provided ample evidence of that.

"The drops of water on the leaves led us to the cohesion of its surface particles. When a plant was disturbed the water drops on the leaves moved separately and ultimately fell off. That led to questions of forces, momentum, acceleration and gravity.

"Of course, the structure of the *jawari* plant came in. Where it was grown and why? brought in Geography. Its comparatively inferior food value led to what food value was, how it was measured and a host of other questions which children asked or which I could stimulate them to ask.

"The place of *jawari* in the economy of our country and of the world led us to realms of Economics. Its importance to a poor country like India and especially to the Deccan plateau explained to boys the care with which every grain was husbanded.

"There were so many common points noticed between the *jawari* plant and human life that the essential unity of all life was very easily brought home to the children. The pantheists and most religious prophets called this 'unity in diversity' as God or due to God, the all-pervading principle.

"So the boys had rendered a definite service to the community. They also learnt to react to life dynamically and methodically. The occasion provided exercise for, and thereby trained a very large number of, physical and mental faculties of both individual and social importance. It led to the acquisition of some knowledge of practically every subject: Economics, Politics, History, Geography, Botany, Physics, Chemistry, Arithmetic, Geometry, Bacteriology, Physiology, Dietetics, Morality, Religion, Philosophy, Aesthetics, and could lead to others which my ignorance alone prevented me from entering.

The boys learnt all this concretely and in an integrated, that is, living manner. And all this to the dance and music of nature.

"It may seem surprising that one of the simplest life processes could be so rich in educational potentialities. Yet is should not seem so. The simplest act of life calls forth the whole man with his instincts and habits, that is, with all his knowledge that has become digested into habits. It lays him bare. Now I understand how Gandhiji could judge a man by the way he swept the floor, washed his clothes or even sat. And yet our educationists refuse to see that the Basic method of education is the most natural, the most sensible and the most economical method. It may have been imperfectly practised; its potentialities only partially laid bare. But even so, it is thousand times better than the avalanche of waste represented by our abstract method of struggling with compartmentalized knowledge, torn from its context in life and thereby rendered unrecognizable".

IV

COMMUNITY ORGANISATION

Community organisation is at the heart of the Nai Talim methodology. Every institution is organised as a self-reliant community—an idealised version of the local community. The improvements effected, however, are within the resource constraint of the local community and are mainly the result of the application of intelligence to the local situation. They are also within the absorptive capacity of the local community with its existing level of technical know-how. This helps the continuous flow of improvements from the school to the local community. For when life is lived according to the Nai Talim principles, where we ask the why and wherefore of everything that we see or do, it results in the rationalisation of every aspect of life and the improvement of every technology used. Apart from the scientific temper which pervades life on the campus, the other two principles which govern it are self-direction and co-operation. When applied to the life of the school community they throw up valuable lessons for the local community, for whose development these principles are of basic importance.

In the Sewagram Nai Talim Centre,[19] comprising the basic school, the training centre for post-graduate basic teachers etc., the major activities—kitchen, safai (cleaning), class-room activities, nursing the sick etc. — each had its own Minister, who looked after the respective activity with the guidance of the teacher concerned and the assistance of the students; and was in turn responsible to the Am Sabha (General Assembly), consisting of the entire academic community, who appointed him for a definite period. The Assembly was again organised and run by the students themselves. The way such activities were organised and educationally exploited has already been described in earlier paragraphs.

The extension activities of the school consisted of the following:

(1) The parents frequently visited the school and from the many activities that were going on in the school—agriculture, spinning and weaving, animal husbandry, oil pressing etc.—they picked up what interested them and carried home improved practices for adoption. Some inventions of the school or improved practices like the smokeless *Chulah*, *Chakki* with ball-bearings, etc., passed to the villagers in varying degrees.

(2) Parents were invited to the various festivals organised in the school. These were organised in a neat, creative and educative way, which had their own silent message. These functions provided recreation and brought the school and the community emotionally close together.

(3) Another splendid opportunity which existed but was not exploited was the possibility of teaching spinning to the family through their ward in the school and enabling them to utilise their leisure time profitably. That would have presumed that the spinning wheel was owned by the pupil. There could be a scheme by which the pupils could pay for the wheel—which is normally kept in the school—and carry it home every day after school hours.

(4) Periodic cleaning of the village—lanes, drains, the village well etc.—by the children in which the villagers also joined.

(5) Through the adult education and pre-basic centre—located right in the village itself—the villagers were motivated to build improved houses on a new site. A co-operative dairy of consumers and producers, comprising five villages also came into being. The Grain Bank and a consumers' co-operative were other achievements of the adult education centre.[20]

V

EVALUATION

Thus Gandhiji's method of education is both child-centred and society-centred. The two interests do not conflict. They reinforce each other. For the highest goal of individual development is commitment to the service of man as a means of the realisation of God. And the society that Gandhiji visualised considered development of the individual identities of its citizens as its most precious asset.

The method is activity-centred in keeping with the child's active nature. The child is curious by nature and wants to explore. Hence the method emphasises helping the child to understand the 'why and wherefore' of things and of the problems he identifies in the pursuit of his activities. This leads to problem-solving, which satisfies his desire to master things. His creative impulse is sought to be satisfied and encouraged, as he creates concrete, useful, marketable things. This has the additional advantage of building his self-confidence and self-reliance. The child's desire to associate with others is sought to be satisfied through emphasis on group activities, organized co-operatively. The method leads to the harmonious development of the child: hands, head and heart. At every point the method is based not on straining the capacities but stimulating them and motivating them. As a result schools become places of 'work, experimentation and discovery, not of passive absorption of information imparted second hand'[21],--active centres of experience and of abundant life'.[22] It is this feeling of 'abundant life' that makes these schools a happy place and not the lack of purpose in activity as some tend to believe. The children find happiness in purposeful activity.

Socially, it tackles the basic problems of a poor country—the problems of unemployment and satisfaction of basic needs. Through emphasis on self-government the pupils are prepared for democracy. Co-operatively organised group activities develop in the children team-spirit, capacity for co-operative action and give opportunity for developing leadership qualities—so essential in a decentralised economic and political order, where a very large number of leaders are required at various levels. It creates respect for our own culture and at the same time creates in the students a rational outlook towards life, thus providing for both continuity and change, required for healthy social growth and development. It develops the scientific temper and a rational outlook, which serves as the alchemy for social transformation. It inculcates on the students social commitment and service to the environing community through a comprehensive extension programme. Nai Talim thus prepares people for a decentralised social, economic and political order as the basis of a non-violent society.

Another characteristic of this method is its attitude to knowledge. In the usual sense, the transfer and absorption of knowledge is the chief aim of education. In Gandhiji's system of education the emphasis is not on the quantum of knowledge but on the method of seeking relevant knowledge when needed to solve the problems of living. The modern 'explosion of knowledge' has made the emphasis on the quantum of knowledge irrelevant, for that can lead to the 'explosion' of the educant himself.

Gandhiji's method had a great deal in common with the Project Method. It is equally child centred and activity and problem-centred. Knowledge is integrated round the problem. The main thing is the problem and knowledge is gained incidentally. A project is defined as "a problematic act carried to completion in its natural setting".[23] Similarly, in Nai Talim each project is complete by itself and has a number of problems and knowledge is sought to solve those problems. But there are important differences between the method of Dewey and

Kilpatrik. Firstly, whereas any activity can serve as a Project, in Gandhiji's system it has to be a rural craft, with both educational and economic possibilities. This, as explained earlier, has vast social implications. Secondly, whereas the projects need not have any connection with each other, in the case of Nai Talim they are a series of inter-connected projects—all parts of a wider, continuing activity. For they are all parts of daily living. Thirdly, whereas in the Project Method we get only incidental knowledge, because of this inter-connection of the projects in the case of Nai Talim and their being a part of daily living, knowledge has much greater chance of falling in place in the child's mind so as to grow into systematic knowledge of different disciplines. A certain system of automatic "drilling" also results, which helps in fixing knowledge in the child's mind, without any deliberate, mechanical and painful effort. Shriman Narain records:

> "During my educational tours round the world in 1949, I had the privilege of meeting for about an hour the distinguished educationist Prof. John Dewey in New York and discussing with him Gandhiji's scheme of education. The professor was deeply impressed and feelingly observed: 'Gandhiji's system of education is, I am sure, one step ahead of other systems. It is full of immense potentialities and we all hope to learn much from India in this revolutionary educational effort'.[24]

NOTES AND REFERENCES

1. *One Step Forward*, Hindustani Talimi Sangh, Wardha, 1940, pp. 91-92.
2. *Ibid.*, p. 219.
3. The Wardha Conference Resolution, *Educational Reconstruction*, Hindustani Talimi Sangh, Wardha, 1939 (3rd Edition), p. 150.
4. *Harijan*, 4 Dec. 1937.
5. *Educational Reconstruction*, op. cit., p. 125.
6. *Harijan*, 18 Feb. 1939.
7. *Ibid.*
8. *First Kher Report*, Manager of Publications, Delhi, 1939, p. 7.
9. *Ibid.*
10. *Harijan*, 4 March 1939.
11, "Intellectual Content of the Takli", *Harijan*, 21 Dec. 1947.

12. "Danger Signals", *Harijan*, 25 Jan. 1941.
13. *Harijan*.
14. *Ibid.*, 7 Dec. 1947.
15. Small mats used by children for sitting.
16. *Harijan*, 7 Dec. 1947.
17. There were two elected ministers—one representing the children and the other representing the students in the training college.
18. *Harijan*, 27 June 1956.
19. This refers to the period 1944-46 when the author was teaching at the basic school and the Post Graduate Basic Training College.
20. A detailed account of these activities will be found in the author's *Building for Peace or Gandhiji's Ideas on Adult Education*, Atma Ram & Sons, Delhi, 1952.
21. *Basic National Education*, op. cit., p. 50.
22. *Ibid.*, p. 51.
23. J. A. Stevenson, *The Project Method of Teaching*, Macmillan, New York, 1930, p. 43.
24. Shriman Narain, *Gandhi, The Man and His Thought*, Publications Division, Ministry of Information and Broadcasting, Government of India, 1968.

SIX

ADULT EDUCATION

IMPORTANCE OF ADULT EDUCATION

Adult education, like the rest of education, was conceived by Gandhiji, as the pivotal force for bringing in a non-violent revolution. He was perhaps the most thorough-going revolutionary the world has known. There was hardly any aspect of life which was left out of his scheme of revolution and radical transformation. That was natural because of his integrated view of life. So was his view of education an integrated one, comprehending all sections of the population and extending "from the moment of conception to the moment of death". Adult education especially of the poor, illiterate villager, was a very important part of his system of education because of his primary concern with the masses on account of their povery, their large numbers, their determining influence on the immediate social climate and the education of their children, the rapport he was able to establish with them which led him to rely on generating their strength as his chief instrument of revolution and finally, his conviction that a revolution to be in the interest of the masses must be wrought by the masses themselves. That is why while his concept of adult education included all adults outside the formal educational system, he spelt out his ideas only in regard to the rural adults.

Aims and objectives

The role of adult education in bringing about the Gandhian revolution was to develop the whole man—body, mind and spirit in perfect balance—to the utmost of his capacity. That would mean a self-supporting individual, co-operating with his family, and the family with the village, to achieve self-sufficiency in regard to its primary needs, thereby developing its competence to establish non-exploitative relationships with bigger environing socio-economic and political units, in regard to other areas of human needs, where co-operation would be necessary and in mutual interest. Self-support, mutual help and social concern, especially for the weakest, were the attitudes, habits and reflexes that adult education was to inculcate in individuals. These would form the unshakeable infrastructure for the non-violent state. This was to be achieved on the basis of our own culture, our own system of values.

This is to be achieved in the context of extreme poverty, dirt and disease; loss of self-confidence through centuries of exploitation; lack of hope in a better future through self-effort; absence of knowledge in the villager of how to better his lot through self-effort; and dearth of resources in a poor country. Over 50[1] per cent of the population in the rural areas are below the poverty line. As regards health, the life expectation at birth was 54.71 (1985-86),[2] the death-rate per thousand was 27 (1951). Doctor-population ratio was 6,500 (1951). The figure is still about 3,500. 50,000 children go blind due to malnutrition (deficiency of vitamin A) every year. The expenditure on health increased from Rs. 8 per capita in 1951 to Rs. 32 in 1982-83. The estimates of health for all by 2000 A.D., would involve the raising of the per annum expenditure on health from about 3.6 per cent of GNP in 1985-86 to 6 to 8 per cent in 2000. According to WHO it should go up to 10 per cent. As regards sanitation, the village is an open latrine. Rural water supply and sanitation programmes would cost the state exchequer Rs. 2350 crores[3] (1985-90). The houses in the rural areas are mudholes, with no ventilation for air or light, and where clouds of smoke from the kitchen fire, without an outlet, leads to the early blindness of the housewife. Rs. 577 crores[4] have been provided in the Seventh Plan for a modest programme of house-site-cum-house construction for landless labourers. This is the condition after nearly 40 years of Independence and 35 years of planned development. The rising GNP leads to increasing the gap between the rich and the poor. Much of the expenditure intended for the poor also passes into the pockets of the intermediaries. At this rate the goal of the removal of poverty enshrined in our Constitution and frequently repeated by our governments, and the provision of Minimum Needs to the poor will be an ever-receding goal, especially with our ever-increasing population. So even the first step towards the Trinity—"equality, liberty and fraternity"—will prove chimerical. Gandhiji's solution was that people should help themselves, singly and in co-operation, to meet their primary needs. And he demonstrated that they could. He said: "This prosperity (of India's villages) will not come from outside, it will grow up within the villages themselves as a result of the labour of every villager. This is the goal of the State New Education, and nothing less than this". Labour, however, was to be performed not mechanically but scientifically, knowing the 'why and wherefore' of every process involved. This would most effectively create in the masses the scientific spirit, the absence of which is regarded by many observers as the cause of India's backwardness. Says Morgan: "One great handicap, to village progress and prosperity is the general absence of the open, enquiring mind and of the scientific spirit. Most young boys and girls in India are curious and enquiring as they are the world over, yet as they grow up that live enquiring spirit is imprisoned in the rigid cage of custom and tradition until it dies. The educational policy all the way from pre-basic education of the year-old child to the graduate school, should be infused with the scientific spirit of free, critical inquiry. Since the early years are largely spent with the mother, the general education of women in the scientific spirit is one of the great needs of the nation, and should be a guiding aim of education".[5]

Another allied aim of adult education is the revitalisation and reinterpretation of old values so as to make them the vehicles of making the new man for his new social order. Gandhiji said: "We cannot throw away what is in our blood, but we must develop it in such a way that it will help the cultural development of the individual, of the society in which he moves, and of humanity as a whole". "This vital cultural heritage, which is still a living reality among the unsophisticated people of our villages, and even in our slums, furnishes us with the solid material with which we must carry out our nation building plan".[6] By making them the vehicles of education he turned our crafts from being the symbols of our poverty to the agencies of our prosperity and scientific development. Similarly, our cultural agencies were used to infuse the spirit of progress and development. Experience-based knowledge, accumulated over the centuries and passed on from generation to generation, as well as the arts and literature—being the expression of the community's system of values, inward richness and sense of beauty—are invaluable treasures of village life, with which the villager is familiar and which he loves. It is the educationist's duty to create in the adult "A livelier appreciation and wider knowledge of this inheritance", which will give him "a new understanding of the strength and beauty of his own familiar way of life". This will restore his self-respect and build up his self confidence "as the repository of the nation's permanent culture". Again, participation in these activities, with a new awareness of their importance, will strengthen fellow feeling of which our folk dances, our art, our folk music, our Bhajan Mandalis and our festivals are an expression. And "Fellow-feeling, neighbourliness, the sense of community, lie at the root of all growth towards the new social order which we desire to see". That is how Gandhiji wanted to build the future with the help of the past. All this had the effect of restoring the self-respect of the adult. This was characteristic of Gandhiji and a measure of his wisdom that unlike many a modern Messiah, he did not reject the past but used it to build the future. Progress is not rootless advance. It should instead strengthen the infrastructure so that a worthwhile super-structure may be built on it.

Similarly, a very important part of adult education is to enable the adults to play their part adequately in moulding the future generation through education in wise parenthood. The parents exerts the most powerful influence on the child's all-round development. The help they can give him or the harm that they can do him through ignorance would be a permanent asset or liability which nothing else in life can replace. The parents must be taught, therefore, the child's needs—physical, intellectual and spiritual. They must learn how through wise expenditure and through sanitary and healthy living they can provide a suitable environment for the child's healthy growth. They must order their own lives also. For their own character, habits and social behaviour constitute the child's first impressions and these are very powerful in moulding the child's mind and behaviour. Their relations in the family and with the neighbours must be friendly. As the child grows up and goes to school, there should be perfect cooperation between the home and the school. Otherwise, the child's mind will be pulled in different directions by the home and the school. And "Good citizens are not created by a state of civil war or faction".[7] It should be the duty of adult education to create an understanding of all this among the parents and the adult community in general. For the children of a community are a social responsibility of the entire community.

Another important aim of adult education with Gandhiji was to revitalise the Gram Panchayat—that institution of self-government, born of necessity, and embodying the moral law representing the joint wisdom of the community for common good and survival. It had become a part of the community's psyche and they instinctively obeyed it. Social disapproval is still a powerful force which stands between the rural community and chaos. For the law and order machinery of the government is still too remote, too thinly spread and too little socially motivated to be an effective alternative. Even if it were, good government is no substitute for self-government. The Government should decide, therefore, to reform the present Panchayati Raj laws to bring the Panchayat in line with the indigenous institution and check some of the disruptive forces which have come in with the introduction of elections, government nominations etc. And it is the task of the adult educators to revive and strengthen the spirit of real self-government in the community.

Literacy was by no means to be neglected. Only it was to be given when the mind had been prepared through oral education about things in the familiar environment in which the adult was interested.

Pragmatic approach: Experiments with adult education

What was the adult education programme Gandhiji had in view to serve these overall social, economic and political objectives? Being a man of action and a scientist *par excellence*, his programmes developed in response to the challenges of the situation in which he found himself. His approach was always experimental. He characteristically called his autobiography 'My Experiments with Truth'. To Gandhiji the challenge of adult education came very early in his public career. When he launched his struggle in South Africa, his only instrument was the people in whom he was to generate spiritual strength so that they could be offered as a pure sacrifice in the struggle against the tyrannical regime.

How did he generate this spiritual strength in ordinary people many of whom were not even literate? The technique that he developed and which he perfected later on was to work through Ashrams.[8] The first one was set up at Phoenix (South Africa). It was followed by those he set up in India in Champaran, Ahmedabad, Sewagram and elsewhere. I had the privilege of living in his Ashram at Sewagram and I would present its picture from first hand[5] Sewagram was one of the dirtiest and the poorest village in Madhya Pradesh, with a large population of scheduled castes. That was perhaps one of the reasons why Gandhiji selected it as his experimental laboratory. The problems he would experience and the solutions he would devise would have relevance to the poorest of the poor, who were always the centre of his thoughts and actions. The Ashram contained people of varying capacities, from illiterates to the most highly educated, who had flocked to Gandhiji to share his life of service. The inmates were men with varying values, qualities of character, competence etc. Gandhiji's first aim consequently was to educate them to gain certain basic competences and imbibe certain basic values before they could be of use to the population around. The ideal kept before them was contained in his eleven vows of non-violence, truth, non-stealing, continence, non-possession, body labour, control over the palate, fearlessness, equal regard for all religions, 'Swadeshi' and absence of feeling of untouchability. These were the ideals towards which each one was to strive according to his capacity for service and to the extent that he was able to incorporate these ideals in his daily living, his capacity to serve the people would improve. Service of man was Gandhiji's concept of service of God. And he who would serve God, must free himself from attachment and slavery of the senses and possessions. These ideals are in line with the cultural and religious tradition of India and are accepted, mentally, by the majority of India's millions unquestioningly.

The daily activities of the Ashram centred round community service, where each one was entrusted with the type of work he was capable of doing. Each one was treated alike irrespective of the functions that he performed. Life was organised at the cheapest level possible so that the expenditure incurred was more or less of an order that the masses could afford. But life was made comfortable and pleasant by the application of intelligence. It was Gandhiji's aim, through this demonstration in the heart of the rural community, to teach them how to make their life clean and healthy within the resources at their command. The result of the application of intelligence was a number of interesting "inventions": baking oven, smokeless *chullah*, a number of devices for clean disposal of refuse, the ball-bearing *Chukki*,[9] a simple type of pressure-cooker and a host of other things.

In order to convey these devices to the villagers, a number of contacts were established with the village: cleaning up of the village by Ashram parties, engaging a few helpers from the village to work in the Ashram as equals etc. The Ashram became the demonstration centre for the farmers around who came every now and then to get the advice of the Ashram workers. And as the guidance given was within the limits of available resources and the technical know-how required for its practice was not sophisticated, the practices suggested were easily appropriated by the villagers around. Such Ashrams sprang up all over the country under Gandhiji's inspiration and carried his message of adult education through demonstration to hundreds and thousands of villages in the country.

Perhaps the most important agency of adult education, however, is the *school*. For there is no other agency which is so widespread and dispersed over the length and breadth of the country. And yet, the schools have hardly played any part worth mentioning in adult education in the country. The reasons are not far to seek. When based on payment to teachers, a programme of adult education, large enough to make any appreciable impact, requires finances which are beyond the means of the States. Again, the teacher's work is primarily with the children and therefore, he can afford only limited time to devote to the adults. The capacity of the teacher to handle programmes of adult education is also very limited, firstly, because the psychology of the adult is different from the psychology of the child and secondly, because our schools have hardly any place for practical work and live problems of the community in which alone the adult is interested. His interest in the three R's is very limited. It was, however, different with the school as Gandhiji conceived it. The basic problems of the community—the problems of food and clothing, co-operative organisation, democratic training of the citizens etc.,—were to be the medium of education in schools. Secondly, the students were to be trained in community leadership as a part of their education. So when the teacher went out to work among the adults, it was not a distraction from teaching the children, he was actually engaged in covering with the children an important part of their syllabus. The school of Gandhiji's conception, as a matter of fact, can be the most effective centre of socio-economic extension work because of its intimate contact with the community—through the children and because of its location in the heart of the village—and the fact that children are fanatical propagators of ideas their teachers give them. In the context of the community development programme every school really ought to have been converted into a basic school and the assistance of all the extension agencies made available to it so that it could fully develop its capacity as a demonstration and extension centre. In the Sewagram basic school, where I had the opportunity of teaching, the Centre of Interest was work: agriculture, spinning and weaving, dairying and animal husbandry, rural industries like Gur-making,[10] oil-pressing etc. The life of the school community was organised on co-operative lines and managed by the children. There was an Aam Sabha or the General Assembly, equivalent to the village Panchayat.[11] The villagers came to the school and carried back many ideas. The spinning instrument that was given to the child, was used by his entire family. When the hosteliers went to their villages during vacation, they organised sanitation programmes, organised national flag salutations and in many other ways carried new ideas to them and immediately became virtual leaders of their localities.

After long years of experience and trial and error, Gandhiji tried to work out his ideas systematically in Sewagram after his release from jail in 1944. In the January, 1945 National Basic Education Conference at Sewagram, he expanded the scope of Basic Education to cover all stages of education. This was his Nai Taleem or New Education. As was usual with him he immediately started experiments in various directions in Sewagram itself. One of these experiments was in regard to adult education. Shanta Narulkar—an experienced educationist, but whose work so far had been confined to children—volunteered to work out Gandhiji's ideas under his guidance. So she moved to a rented house in the Harijan quarters[12] in the village. She was to work as a *Samagra Gram Sewak* or an all-round helper of the village. This concept was later adopted when the Government started the Community Development Programme, in the form of the Village Level Worker (VLW).

Sewagram was one of the poorest and dirtiest of villages and so was a good laboratory for working out a national programme, the main target of which was the poorest of the poor. Gandhiji's first directions were three-fold: the worker must live in the village itself; his work must be educational, aimed at sharpening the people's awareness of their real needs and generating their initiative and resourcefulness to meet these needs themselves; and finally, the programme should be self-supporting. He had said: "Give them whatever service they need in sick nursing or any similar work; but never give money. Adult education does not need money".[13]

A preliminary survey through house to house visits and talks with individuals and groups revealed the extremely unsatisfactory state of affairs in regard to their primary needs of water, food, clothing and shelter. The most pressing need was for a clean supply of drinking water. While there was a public well and a number of private wells in private houses, they were badly kept and were a source of infection and mosquito breeding. Through her discussions with people she was able to convince them of the need for periodic cleaning of these wells and persuaded them to co-operatively clean the public well in the first place. Some contributed money, others contributed labour. "The well was cleaned," records Narulkar, "and the filth and evil-smelling mud which were taken out were shown to the people. They at once understood the need for regular cleaning. That summer most of the wells were cleaned by mutual help. The cleaning operation, the provision of protecting walls and proper drains for the water used in bathing and washing clothes—all provided a series of practical lessons in the use and care of wells. The cleaning and disinfection of the wells was carried out in succeeding years in the month of May. By repetition a habit and tradition was established and along with it a habit and tradition of mutual help.".[14] Working together in this intimate fashion helped to break down caste barriers. The work also helped her to identify natural leaders, who could be, and were trained for undertaking responsibility for common good.

She next turned her attention to housing. Houses in Sewagram, as in other Indian villages, are really small holes, with mud-walls and a roof put somehow, with no arrangements for light and air except a low entrance door; and very often the cattle and the inmates share the same roof. When Narulkar started work some people were renovating their houses, but the result from the light and air point of view was as unsatisfactory as before. She tried to talk to them. Slowly and steadily the need for change began to be realised by the people and ultimately a Cooperative Housing Society was established. A small plot of land was acquired from the village and a few model houses were put up there. The plan was provided by the society. This plan and the budget were discussed with the owner. The money was spent only on essential materials and some paid labour that had to be employed to augment his own and that of the other members of his family. The neighbours provided free service of their bullock-carts. A well-planned house—consisting of a veranda, two living rooms, a kitchen and store room with a partition in between and a bath-room, with some open space on both sides of the house—on a plot of 35′×35′, was thus available for Rs. 900. The owner learnt how to build a house at minimal cost. As those who joined the co-operative settlement had to observe certain rules of health and hygiene, their education on that front also advanced.

The circumstances and the needs that emerge therefrom dictate the steps to be taken in the adult education programme. When rationing came into effect 12 villages had to collect their ration from one centre, which involved time, loss of the day's wages and inconvenience. For during the rainy season the black cotton soil makes village roads extremely difficult. To these was added the outbreak of cholera at the distributing centre. So the village decided to buy their own ration in bulk and distribute it among the villagers. The money was collected by contributions, varying from 8 annas to 5 rupees, according to capacity. The total amount collected was Rs. 210, with which the co-operative store was started. By the time of reporting, it had grown to a multi-purpose co-operative society with a capital of Rs. 2500. The whole village owned it. An "Executive Committee" had been formed of the natural leaders who had emerged as a result of activities of mutual help started under the adult education programme. The co-operative was managed by the Executive Committee members without payment. They also shared the first loss. Later on the co-operative was running at a profit, which went for scheme of welfare of the village as a whole. The idea spread to other villages.

The Executive Committee also organised, again without payment, the co-operative Grain Bank. Here, farmers deposited grain, according to their capacity, at harvest time; and borrowed from it, according to their need, returning it at harvest time in kind with 25 per cent increase. The initial stock of 30 maunds increased to 100 maunds in three years. The increase was partly due to the entry of new members and partly due to the 25 per cent increase formula. As a result, the farmers were saved from the clutches of the Mahajan (money-lender) to whom they would have been compelled to go to borrow to purchase their requirements of grain in months of scarcity. This also increased their self-confidence that they could help themselves collectively, which built up a habit of co-operation and mutual help.

The co-operative habit spread. The milk producers and consumers from five villages came to form a co-operative dairy. The consumers had their own co-operative and the producers their own and they coordinated their activities. Together they planned the year's programme and frequently met to discuss the problems arising from day to day. The consumers' cooperative gave credit to the producers to increase and improve their stock. Producing centres were supervised. Veterinary help was arranged when needed. The collection, testing and sale of milk, the keeping of accounts etc., were managed by the Post-Basic boys of the Hindustani Talimi Sangh, with the help of a Committee. After two years of work the capital of the consumers' co-operative rose to Rs. 2,020 and of the producers Rs. 60.

The other task Narulkar had to tackle was that of sanitation and scavenging. As in other villages, the people had the habit of easing themselves anywhere with the result that even the approach road was filthy and could not be kept clean even with the help of a scavenger, who had been engaged. The scavenger was at the end of his tether. Narulkar's first task was to persuade the people to put up four trench-latrines on the four sides of the village and then to persuade them to use them. The trenches were dug, the seats were provided with split palm trunks and privacy with palm leaf screens—palm trees being in abundance in that area. The total cost of the four latrines was only twelve rupees. Slowly the habit of using them also grew. People were also taught to collect the weeds and undergrowth from the roadsides and throw them for composting in the trenches. Not only did the place become clean, people learnt to take charge of their own cleanliness and scavenging, instead of the degrading social custom of entrusting it to the *bhangi* community, thereby making them eternal outcasts. Gandhiji always insisted that our scavenging should be done by ourselves. With this a social revolution had taken place in the village. Similarly, the problems posed by the absence of drainage were tackled through the construction of soak-pits—at a cost varying from 75 paise to two and a half rupees — which gave good service from one to two years, when they had to be dug up again.

Reviving the Gram Panchayat was another task which Narulkar had to attend to. For this was the only institution which could mobilise and express social opinion, whose corrective pressure was the only force making for the maintenance of law and order and peace in the village. This is an ancient institution consisting of men of good will trusted by the village for their qualities of character. Their decisions are respected in matters of dispute. They are highly responsible. In spite of its occasional failings and its recent deterioration as a result of the introduction of elections, the Panchayat still remains a force. It is still respected. It is still obeyed. Where people are not satisfied with the character of the Panches, elected or nominated, the villagers take their dispute for settlement to recognised men of good will. The Panchayat in its essence "stands for a noble conception of civic responsibility and public service, and its persistence is evidence that the people of the villages understand these ideals, however dimly, any may be awakened to a clearer consciousness of their real administrative needs. The revitalisation of the true concept of Panchayat Raj thus becomes the focal point of adult education in citizenship".[15] Citizenship training, which is an essential part of adult education, should be provided in terms of the Panchayat, of which the villager has first hand experience, and of which he realises the need and importance.

In Sewagram there was no Panchayat at the moment and no machinery functioned for maintaining law and order or discharging other civic responsibilities. After a great deal of explaining, discussing and persuading the Panchayat was revived.

In regard to the production of cloth, spinning had become common in the village through the agency of the school. The Spinners' Association sent a worker who set up three looms and took village boys as apprentices. Later the number of looms was increased to twelve and six more men and three women were taken as apprentices to learn weaving. In the first year 1750 sq. yards of cloth were produced and sold. Other village industries such as oil pressing and palm-gur followed with the help of the local Post-Basic boys.

The parents exercise the most determining influence on the child's physical, mental and spiritual development in its most impressionable years. These are potentially the richest years from the point of view of development. Ignorant parents, however, not only miss tremendous opportunities for pushing the child forward, they also lead to irreparable harm through wrong handling. So adult education in wise parenthood is the first step towards child education. This would include: child development, improved economic condition and wise spending, the impact of the habits and attitudes of the parents and other adults on the child, the need for a harmonious atmosphere round the child, the physical and mental needs of the mother and the duty of others, especially the husband, towards her etc. Narulkar carried out these tasks with the co-operation and help of the child welfare centre established there by the Ashram in February 1945, under a trained nurse, helped by the school teacher's wife.

Summing up her work in Sewagram, Narulkar says: "Nevertheless, in spite of all these efforts, we cannot say that we have reached the ideal of Gandhiji's co-operative plan. His ideal was that every adult who works should labour not for himself only but also for his neighbours and to build up the common good of every one in the society of which he forms a part. In such a society there will not be any exploitation of man by men, and it should be the aim of every member of the village to lead such a co-operative life, in which every adult will play his full part".[16]

Another highly significant experiment, based on a single all-round worker, was conducted in riot-torn *Noakhali* (East Bengal) at Bhatialpur, by Pyarelal, Gandhiji's Private Secretary. It was described by him in three articles in the Harijan which have been reproduced for ready reference in the author's book—entitled "Building For Peace or Gandhiji's Ideas on Social (Adult) Education".[17]

In pre-Partition India in 1986, the cummulative consequences of the British policy of 'divide and rule' climaxed in widespread violence and counter-violence, in which some of the worst barbarities known to history were committed. In this Noakhali in East Bengal (now Bangladesh) was one of the worst affected districts and Gandhiji went there, as to other places subsequently, to quench the fires with his ministry of love and service. The story of his efforts and achievements in fighting the flames is unparalleled in history and can best be purused in Pyarelal's "Mahatma Gandhi—The Last Phase"

(Vol. I).[18] In this struggle, so completely did Gandhiji want to throw himself on God alone that he divested himself of the help even of his most intimate colleagues, on whom he had depended for years for his minutest needs. They were scattered at different centres of constructive work set up in the district to build up the courage of the Hindu minority who had been the victims of the recent riots. The task was two fold: to teach the Hindus to be dauntless in the midst of a hostile majority and yet not to give way to the mad impulse of revenge; and to make the Muslims repent and make amends for what they had done. How this happened now reads like a fairy story.

Of the three articles mentioned above, 'Sacred Moments' records how courage of the bravest type was inculcated in people who were living a death-in-life existence after recent experience of orgies of murder, arson and rape. Even girls of tender age vowed that they would face death rather than be afraid. One of them went to the murderer of her uncle and said, in Pyarelal's presence, that he could cut her throat also but she would not tremble or run away—to the great embarassment of the murderer. A women's court was able to try a bad character who made indecent gestures to one of them and made him apologise. Men and women, who out of fear had removed all the external symbols of their religion, and did not open their lips to tell you their tale of woe till they had taken you to the inner-most room in their house, were now marching from village to village in a procession singing Ram Dhun (the Hindu way of chanting God's name). And this in a place where tiny hamlets are separated by thick jungles and tiny rivulets; and where recently men, women and children had been murdered in cold blood, or women raped in the helpless presence of their men-folk. Apart from the change that Gandhiji's coming into the district had wrought, the alchemist was Pyarelal—the Samagra Gram Sewak, without being called one—whose fearlessness, faith in God were infectious. His instruments were personal example, prayer, discussions and resourcefulness. To these he added lessons of self-help on the material plane—"scavenging and sanitation", "a little nursing, care of the sick and elementary rules of health", "Takli Upasana" (sacrificial spinning) etc.

"The Co-operative Production of Coconut Oil as a Relief and Rehabilitation Measure" contains an account of an excellent example of how we can exploit natural resources in our immediate environment to teach people self-help and build up their confidence and resources as well as create in them a habit of mutual help and develop their capacity for organisation. That is the way to make adult education relevant, effective and self-supporting.

Coconuts are grown in every Bari (house garden). Oil extraction is a household industry. To get the maximum benefit, a co-operative was organised so as to collect the product, pack it in tins and seal it, and then to transport it to the weekly market. The money thus earned enabled the members to buy additional coconuts and thereby increase their scale of operations. To motivate the producers to become members Rs. 4 per seer was paid to the members while only Rs. 3 to non-members, one rupee being kept with the co-operative as their share capital deposit. To become a member a producer had to become self-supporting in regard to clothing by learning spinning. His family members had to do the same. Every member of the co-operative had to grow at least four plants of tree cotton per each member of the family. The cotton from these plants would be the property of the co-operative and would be delivered free to all those who would spin for themselves. This way self-support in the matter of clothing was encouraged; and so the money earned did not find its way to the cloth merchant.

Secondly, the idea was to teach them how to make full use of the by-products: the cocoa-nut shells out of which beautiful tea-cups, sugar-pots etc., could be made as the experiments at the Kazirkhil Camp—the headquarters of the network of constructive work centres—showed, coir, which could be turned into string much in demand in the local market and selling at Rs. 2.50 per seer; and Chhoba and Machka (cocoa-nut butter and oil cake) which could be preserved by addition of Gur (sugar) and by salting and dehydration to serve as a standby in times of famine.

Thirdly, a habit of co-operation and working for the common good was sought to be inculcated by giving one seer of rice at control price to those who would provide two hours of free labour for the common good. This at the moment consisted of helping to repair village communications, build new roads and bridges—small bridges over rivulets etc.—and grow more food in their own and other people's house-gardens by planting Jal Cochus (a water plant) and introducing singhoria in tanks which were then choked with weeds and rendered useless.

The experiment was conducted for about a month and a half. By then the various parts of the scheme had been implemented, though the part regarding the utilisation of the cocoanut shells, which required a few hand machines and the services of a technical expert to teach the various manufacturing processes to the people, had just begun. The first fortnight saw production of 4 seers and odd of oil. During the closing and penultimate weeks it went up to "16 and 14 tins of 19 seers each, equivalent to Rs. 1,216 and Rs. 1,064 respectively". Pyarelal adds: "The total amount of oil produced so far is nearly 50 tins worth Rs. 3,800. It gave occupation towards the closing stages to 130 families, 97 being Hindu and 33 Mussalman and in fact was the only thing that stood between them and starvation. It enables a woman to earn Rs. 2-2-0 per day. Total amount put into the pockets of the poor during the one and a half month that it was in operation came to about Rs. 1600, the amount of share capital deposit with the co-operative society being nearly Rs. 900. Some of the women have accumulated amounts up to Rs. 20 to 30, which they had never done in their life-time and all this in one month.

"Under the self-help and self-sufficiency part of the scheme, 6,581 Jal-Cochus, 420 Tan Cochus, 650 cotton plants plus 320 cotton seedlings have been successfully grown in the five villages of Bhatialpur, Karatkhil, Mogarpara, Narayanpur and Rezakpur so far and are estimated to yield 350 mds. of tubers for food and 1,950 lbs of lint equivatent to 8,700 yards of cloth".

While passing on this article to the Harijan for publication, Gandhiji added the foot note, "This deserves wide publicity. On way to Patna—M.K.G".

"The Inert Thakur Became A Living Presence" shows how out of nothing practically could be created means to teach self-help to a people who had become economically and spiritually bankrupt. The occasion for starting the community of three villages—Bhatialpur, Karatkhil and Mogarpara—on the road to self-help and knitting them close together through co-operative action was provided, when the people of Mogarpara wanted to instal the Thakur (Deity) in their Thakurghar,[19] which had been destroyed in the recent riots. The villagers asked Pyarelal to give them a note to the rationing officer for the issue of a piece of cloth to be spread at the seat of the Thakur. Pyarelal put them to shame that they had to depend on the rationing office for the Deity also; and suggested to them to depend upon their own efforts. They had been spinning for some time for the fun of it. This was done on bamboo Taklis (twirligigs), which were made out of local material and so cost nothing. Similarly the other processes of ginning and carding were done by hand with simple instruments, locally constructed. Cotton was provided by people from the cotton trees growing in their own compounds. They collected all the yarn they had spun so far which was turned into cloth overnight by one of themselves. As already stated cocoa-nut oil production had been started as a cottage industry. It was decided that everybody would donate one day's production for this sacred occasion. The net profit was Rs. 16. Out of this Rs. 4 were spent on jaggery which, mixed with cocoa-nut butter and oil cake, made delicious Sandesh (a delicious sweet) and provided Prasad.[20]

The Thakurghar was repaired mostly by their own labour. The earth required was dug out of the adjoining tank, thereby deepening it. As a mark of respect to the deity the tank was cleared of water hyacinth and its dilapidated embankment was repaired "by working late at night although several of them suffered from malarial fever".

In the place of the image of the deity, which had been destroyed during the riots, Gita[21] was installed. "After the Harikirtan",[22] adds Pyarelal, "I explained to the gathering how through their labour of love they had converted the inert Thakur into a living presence, which would keep them, if they kept their covenant with Him. Their Thakur had not deserted them as some of them had complained. It was they who had betrayed their Thakur by bartering Him for their miserable belongings and existence. They had lost Him, but He would come back to them and protect them if they pledged themselves never to let that happen again even if it cost them their life. They had weathered out the dark days of lawlessness and terror by enveloping themselves in the protecting mantle of Ramanama, which they recited daily. By what they had done on that occasion, they had given body to their prayer. They were faced by a precarious future. When East Bengal was constituted into a separate sovereign State[23] they would have to live there as a permanent minority, entirely dependent for its safety and integrity on its inner resources. But a minority of one can convert itself into a majority by alliance with God. What they had done that evening indicated the way how to do it. 'Your Thakur will not only fill you with faith which dispells all fear, but also provide you with food and clothing so that you will never go hungry or naked if you continue to serve Him as you have done on this occassion'.

"The pledge was taken by all by observing two minutes' silence".

The results were already beginning to appear. That season their income from the cocoa-nut oil production went up to Rs. 1600, with Rs. 900 with the co-operative as their share capital deposit. In front of the Thakurghar 11 spinning wheels and 22 Taklis continued to ply daily, with the result that every one of the spinners would soon have, stated Pyarelal, "at least one piece of cloth prepared out of self-spun yarn".

Another institution which Gandhiji used for mass communication with tremendous effect was the institution of *mass prayer* followed by a discourse. Discourses on religious themes to mass gatherings is an old and widely prevalent practice in India. He only modernised it in the sense of introducing a prayer which contained excerpts from many religions, thereby emphasising their common core and the possibility, necessity and advantage of their happy co-existence. It also contained the eleven vows already mentioned, which defined the goals towards which the nation must move, each according to his capacity and determination. The determination to remove the major defects in Indian national life: violence and untruth, fear of the oppressor, untouchability etc.—was thus repeated every evening by thousands of people wherever he went, and in a lower key at all places where his soldiers of non-violence spread. He also used this forum for educating the masses in regard to the implications of the major events of the day. Every speech, of which an authorised version was prepared or seen by himself, was reported in every important newspaper of the country for the education of the literate public.

To these may be added the vast network of institutions of constructive work that he established. The All India Spinners Association (Charkha Sangh) was to teach the people spinning and weaving and thereby enable them to become self-reliant in regard to cloth. The Gram Udyog Sangh (The Village Industries Association) was to propagate and improve the skills of the artisans as well as help them in procuring raw materials and marketing their goods. The Adamjati Sewak Sangh was to help the tribals, and the Harijan Sewak Sangh was to help the untouchables. The basic idea was to help them to become self-reliant and provide them assured employment. Towards the end of his life he was working for the integration of all these organisations under the leadership of the Hindustani Talimi Sangh. For he wanted to impregnate these organisations, which had grown up at different times under specific circumstances and while Gandhiji was perfecting his tools, with the approach of Nai Taleem, which was to do these activities not mechanically but scientifically so that they became agencies for drawing out the best in every man, woman and child. Death prevented him from achieving this goal.

That is now he dug his feet firmly into the ground, and built up the non-violent strength of the people, which enabled him to soar without losing his bearings and helped him to launch his mighty Satyagrah (non-violent 'passive resistance') movement which brought the mighty British empire to its knees within the span of a generation. These movements represented his educational effort at its intensest. As he said: "Passive resistance is the noblest and best education. . . . It should be an essential of real education that a child should learn that in the struggle of life, it can easily conquer hate by love, untruth by truth, violence by self-suffering".[24]

When he came to India in 1916 he found her "nothing but a dead mass movable at the will of another" and had to be reawakened from her torpor and enforced idleness".[25] The

Indian intellectuals were so dazzled by Western culture that they developed an inferiority complex in regard to their own. Even those who revolted against the present prevailing economic and political conditions could only submit petitions to the foreign rulers. To the demoralised nation Gandhiji's words came like a clarion call and inspired them with self-respect and confidence:

> ". . . modern civilization represents forces of evil and darkness, whereas the ancient, i.e., Indian civilization represents in its essence the divine force. Modern civilisation is chiefly materialistic, as ours is chiefly spiritual. Modern civilisation occupies itself in the investigation of the laws of matter, and employs the human ingenuity inventing or discovering means of production and weapons of destruction, ours is chiefly occupied in exploring spiritual laws. Our Shastras lay down unequivocally that a proper observance of truth, chastity, scrupulous regard for all life, abstention from covetting other people's possessions and refusal to hoard anything but what is necessary for our daily wants is indispensable for a right life; that, without it, a knowledge of the divine element is an impossibility. Our civilisation tells us with daring certainly that a proper and perfect cultivation of the quality of Ahimsa which in its active form means purest love and pity, brings the whole world to our feet".[26]

Gandhiji's unparalleled hold over the masses was the result of his love for God, expressing itself in intensive love for mankind and the lowliest of the low, through selfless service; and his perfect identification with them by living in the midst of the poorest of the poor, dressing like them and living at their level of resources and within their constraints. This not only enabled him to build a rapport with the masses but also enabled him to feel their problems in his blood and all along the heart. His deep understanding of our ancient culture immediately struck a sympathetic chord in the hearts of the masses, who are the unconscious repositories of such culture. His resourcefulness enabled him to suggest solutions to their problems and gave them the confidence that they could raise themselves by their own efforts. His intense sincerity, where he never asked others to do anything what he had not done himself, and utter selflessness made him loved and respected by the people and they were prepared to follow him even to certain death. Men, women and children at his behest went to jails, stood up against Lathi charges and machine gun-fire without financing and without returning violence by violence. When Gandhiji fasted the whole of India shook. With his spiritual appeal Gandhiji combined his singular power for organisation. He gave the people symbols—the spinning wheel became the symbol of non-violence—Khadi became "the livery of freedom" etc.—and wherever he went he felt behind a local committee, with whom higher leadership could remain in touch for providing help and guidance. Again, he knew how to involve the people by giving every one and every community something to do and thereby feel themselves as parts of the great movement.

Gandhiji used his movements to build in masses fearlessness, made them aware of their present slavery and developed their will power to be free, and he developed their inherent strength for non-violent resistance through self-reliance and removing their own weaknesses—communal and religious strife, untouchability, exploitation of the poor by the rich etc. A great social revolution was going on side by side with the political struggle—as a matter of fact supported it and provided it the strength to succeed. The social transformation being the result of persuasion and having been effected non-violently in the minds of men, it endured. This was Gandhiji's comprehensive scheme of adult education.

Principles of work

The question which next arises is whether these experiments which were conducted in the context of certain specific circumstances are capable of yielding principles which could guide future workers in other circumstances and whether any coherent thought can be extracted from them. A critical examination of his experiments, as well as what he said to the Adult Education Committee of the Hindustani Talimi Sangh in August 1945, combined with elaborations he made while explaining things to Narulkar reveals fairly clear-out principles of work for a nationwide programme which are proposed to be summed up in the paragraphs that follow.

The first principle which emerges is the need for faith in the adult. Like a true educationist Gandhiji had immense faith in the Indian masses. The faith that he reposed in others was something to be seen to be believed. It was one of the secrets of his capacity to make heroes out of clay. It was a measure of his faith in them that he chose the Indian masses as the instrument for his non-violent fight against the mighty British Empire.

Secondly, the adult must be adequately motivated. This can only be done by beginning with an attempt to satisfy his felt needs. In view of India's grinding poverty Gandhiji said that even God must come to the masses in the form of bread to be understood and appreciated. The most relevant thing to the people was how they could improve their economic condition. Therefore, he suggested that adult education must begin with some economic activity, which would prove profitable to the persons concerned. Such activities in the Indian [village could only be agriculture and the handicrafts. The economic activity has, however, to be co-operatively organised to be effective. Gandhiji said: "Adult Education centres would take the form of producing and consuming co-operatives". And he was confident that "The Plan when perfectly set into motion would provide its own finance". He was not worried if without external finance the progress seemed slow: "We must be determined not to try to artificially stimulate it with the help of money power". The basis of his confidence was: "Just as the accumulation and possession of money gives power so also does the development and organisation of co-operative effort give power which is beyond all our expectations". He went on to say: "Give me earth, sand, stones and human labour. You can leave out money. I do not need it for my purpose". This activity, however, is not to be done mechanically. But all relevant knowledge ought to be provided orally at this stage so that the things done become interesting and appeal to the intellect and emotions as well. Even where the most keenly felt need at the moment is not economic—say, when an epidemic has broken out and the immediate need is medical help—and the adult educator has to make the satisfaction of another need as the entry point into the community, he will link it up cleverly with an economic activity and self-support as demonstrated by Pyarelal in "The Inert Thakur".

The third principle is that the programme should go on widening with the widening of the felt needs of the adults and with the growth in their capacity to provide the resources for programmes required to meet those needs. After the economic activity had demonstrated its profitability, given faith to the villager in the usefulness of the knowledge imparted to him and built his confidence in his own capacity to better his own lot, Gandhiji would put the tool of adult literacy in his hand.

There is some misunderstanding in regard to Gandhiji's attitude to literacy. Gunnar Myrdal in his 'Asian Drama' has said: "But in Gandhi's gospel of basic education there was undoubtedly a bias against intellectualism and in particular a down-grading of the importance of literacy."[27] This does not appear to be a fair assessment. Gandhiji's position in regard to "intellectualism" and literacy needs to be clearly stated and carefully understood. He had a balanced view of the various factors involved in the educational process, the aim of which was to develop a balanced personality—the "all-round drawing out of the best in child and man—body, mind and spirit"—of which intellect was only a part and that also not the most important. For Gandhiji's main emphasis was on character-building. "The end of all knowledge", he said, "must be the building of character". And again: "What is education without character?" and "What is character without elementary personal purity?" Similarly in regard to literacy. While it had its legitimate place as a means of education, it did not get the exclusive importance it gets in the prevailing system of education, which has become out-dated according to the latest educational theories. He said: "Literacy is not the end of education, nor even its beginning. It is one of the means whereby men and women can be educated". Even as a means of education, Gandhiji was of the view that ten times more tangible knowledge could be given through word of mouth than through the printed word. But literacy had still a place of its own and a very important one. "Mass illiteracy", said Gandhiji, "is India's sin and must be liquidated". Gandhiji, however, admitted that in the beginning he did not attach much importance to literacy but he was increasingly beginning to see the value of this instrument of mass education on which Gokhale, his political Guru,[28] had laid so much emphasis. Gandhiji's earlier reaction was the result of the over-emphasis on literacy that was placed in the literary system of education, which was prevailing in the country. But as time passed and he began to get rid of his initial reaction, he gave literacy its legitimate place among the means that could be used for education. Only he would give literacy to the people when they had been prepared for it through purposeful and gainful activity. The rationale of this is that if literacy is imported without this preparation the adults will either not begin the effort of reading and writing, or even when they join the classes they will not be able to put in the sustained effort required. Secondly, it is better to give this neutral instrument of literacy to the people only after a sense of discrimination had been developed in them for identifying useful knowledge through purposive activity, the results of which are immediately visible. Thirdly, it will open up the possibility of the adults supporting the provision of follow-up literature required for maintaining literacy, the cost of which, it is to be met entirly by the State, would be formidable.

His strategy of imparting literacy would be as follows. In the first instance he would present in the written word knowledge that had already been imparted through word of mouth in connection with the economic activity with. That would make it easily understood. The interest was more likely to be sustained in view of the value of the knowledge imparted having been already tested. The people were likely to be anxious to get more knowledge of the same type. If properly organised they were also likely to be prepared to and able to pay for it. Later on, as their area of interest widened, literature pertaining to health and other activities were also likely to find a ready market amongst them. The knowlege imparted should centre round the concrete problems of food, clothing, shelter, etc. The project approach to literacy was likely to evoke much greater interest in the adults than knowledge centering round abstract subjects. He stated: "When we have attracted people's attention through craft and they understand that the mind can be developed through it, we shall teach them literacy. They will then be able to understand its use. We shall then publish the knowledge we have imparted and which they will be in a position and eager to use".[29] If literacy was thus related to the daily life of the people the danger of relapse into illiteracy would be obviated. Writing in the Harijan of 22nd June, 1940, Gandhiji said: The relapse is bound to occur after the short courses that are given. The relapse can only be prevented by correlating the teaching to the villagers' daily wants. The dry knowledge of the three R's is not even new, it can never become a permanent part of the villagers' life. They must have knowledge given to them which they must use daily. It must not be thrust upon them. They should have the appetite for it. What they have today is something they neither want nor appreciate". This is also the lesson of the various literacy campaigns conducted in this and other countries.

Having won the enthusiastic co-operation of the people for his educational programme Gandhiji would go on to the more difficult task of teaching them the laws of health and hygiene, the observance of which would require the change of centuries-old habits.

These three programmes: a useful economic activity, co-operatively organised, literacy and health and hygiene were his immediate targets. These are simple programmes and yet it would make a tremendous difference to the solution of India's basic problems if the entire population was involved in them in the manner that he suggested. Further programmes can go on being added as the capacity of the masses to support them increases and as the circle of their felt needs expands with the growing refinement of their senses and tastes.

His concept of an adult education worker was that if he was to suggest solutions relevant to the life of the people, then he must live at their level and in their midst, making his own life more comfortable only through the application of intelligence, the results of which he should teach to the community. He should be resourceful enough to find remedies to the problems of the villagers and hence he should have the capacity to battle constantly with the environment. He should create his own resources rather than be dependent upon outside financial help. A very interesting instance comes to my mind. Once he was ill and Dr. Sushila Nayar, his personal physician, brought a stove to give him inhalation. He immediately took her to task because a stove would not be available to the people at large and hence she should have selected only an ordinary *chulah* which was all that was available to them. His whole life was a constant attempt to live at the level of the masses.

Adult education is perhaps even more teacher-centred than any other stage of education. His love and respect for the students are very important in the most important task of restoring their self respect. His identification with the students and continued presence with them are necessary for keeping track of their developing felt needs and devising programmes and strategies to meet them with their developing resources and within their constraints. Like tight-fitting clothes to a growing child adult education programmes need frequent alterations and marginal adjustments. And the teacher's resourcefulness is all the time in demand. Adult education is a slow educative process in which his years-old habits, ideas and knowledge are subjected to change and development on a rationally understood basis. A new discrimination and maturity can only be developed slowly. Adult education is thus not bombardment of the adult with ideas and sensations which can only confuse him and create mental chaos. This would strike at the stability of values which are the strength of the village community. This lesson needs to be learnt seriously by modern media enthusiasts. Modern media, even when used, have to be used discriminatingly with the help of the teacher who may have a say in the selection of the programmes and their timing and who should enable the adult to keep pace with and draw the proper lessons from the fast moving media. The programmes should also have as much local colour as possible. Discussion groups after T.V. shows and radio broadcasts are very important. In this context the indigenous cultural media have a definite superiority because of the familarity of the themes, the involvement of the people as a community, the opportunities for creativity that they provide, the local resources that they mobilize of talent and money, their slow pace which enables better comprehension etc. And they can be and have been utilized for purposes of change and development through the path of least resistance. Anybody who has heard a clever Ramayan Katha Vachak (Lecturer on the epic Ramayana) will easily understand this.

Again, the approach to the villager should not be fragmentary but integrated. The various programmes provided must fit into each other and follow each other in appropriate sequence so that they together, by reinforcing each other, make a deep impact on the adult. For the purpose of education is to stir him deeply which would issue forth in improved action and behaviour. The existing adult education programmes may have all the elements—literacy, lectures on health and agriculture, entertainment etc.—but they do not stir the adult into fundamental change. The programmes are wide, not deep, and scattered.

His originality

The above principles are not new and any adult educationist can ignore them only at his peril. Gandhiji's originality consisted in the way he worked out their implications in detail in the Indian context and linked them to far-reaching revolutionary goals.

NOTES AND REFERENCES

1. The above estimates are derived by using the All India poverty line of Rs. 65 per capita per month at 1977-78 prices, corresponding to daily minimum calorie requirement of 2400 per person. *Sixth Five-Year Plan* (1980-85), Government of India, Planning Commission, p. 16.
2. Seventh Five Year Plan, *op. cit.*, p. 270.
3. Seventh Plan, *op. cit.*, p. 303.
4. *Ibid.*, p. 294.
5. Arthur E. Morgan, *Higher Education in Relation to Rural Indi* (Memorandum by Arthur E. Morgan, Chairman, Tenessee Valle Trust, U.S.A.; Member, University Education Commission, Government of India, April 1949), Hindustani Talımi Sangh, Sewagram 1950.

6. *A Picture and Programme of Adult Education*, edited by Shanta Narulkar and Marjorie Sykes, Hindustani Talimi Sangh, Sewagram, Wardha, M.P., 1951.
7. *Ibid.*, p. 33.
8. Used to denote residential institutions where a group of people, devoted to a certain ideal, generally religious or with a large religious or moral orientation, reside.
9. A simple device for grinding corn.
10. Prepared by heating molasses.
11. Local village authority on the basis of adult franchise.
12. Harijans (Scheduled Castes) are the untouchables of Hindu society. The removal of this blot was Gandhiji' top priority.
13. *A Picture and Programme of Adult Education*, op. cit., p. 43.
14. *Ibid.*, p. 22.
15. *Ibid.*, p. 19.
16. *Ibid.*, p. 29.
17. Published by Atma Ram and Sons, Delhi 1952, pp. 43-59.
18. Published by Navajivan Publishing House, Ahmedabad.
19. The shrine of a deity, place of congregational worship, equivalent of a village church.
20. Sacramental sweet distributed to the congregation at religious ceremonials.
21. An ancient highly philosophical discourse on the nature of the soul and the philosophy of action without attachment to the fruit of action which Gandhiji described as his lexicon of ethics and guide to action translated into English verse by Sir Edwin Arnold as "The Song Celestial".
22. Chanting of God's praise.
23. This was in the months anterior to the partition and the birth of Pakistan on 15th August, 1947.
24. Tendulkar, *op. cit.*, p. 200, cited in Pillai, N.P., *op. cit.*, p. 132.
25, *Ibid.*, p. 274, (Pillai, p. 127).
26. *Speeches and Writings of Mahatma Gandhi*, op. cit., pp. 331-32.
27. Myrdal, Gunnar: *Asian Drama*, Volume III, pp. 137-38, Pantheon, New York.
28. Teacher.
29. Nayyar, Dev Prakash, *op. cit.*, p. 32.

SEVEN

PRE-BASIC EDUCATION

IMPORTANCE OF THE PRE-SCHOOL AGE

The importance of the pre-school age from 0 to 6/7 years when most of the children go to the primary school is threefold. Firstly, the numbers involved are very large. In 1978-79, it was estimated that 7.6 million would be less than 1 year old, 15.2 million of 1-2 years and 20.3 million of 3-5 years.[1] Secondly, the potentiality for growth and learning at this stage is tremendous. Thirdly, any neglect at this stage would have life-long consequences which would be almost impossible to ractify through remedial measures that may be adopted subsequently.

While Basic Education, to meet the needs of compulsory primary education, was the first to be presented as a part of his concept of a national system of education, due to historical circumstances, Gandhiji had long ago emphasised the importance of pre-school education. In his Autobiography he wrote: "We labour under a sort of superstition that the child has nothing to learn during the first five years of its life. On the contrary the fact is, that the child never learns in after life what it learns in its first five years. The education of the child begins with conception. The physical and mental states of the parents at the moment of conception are reproduced in the baby. Then during the period of pregnancy it continues to be affected by the mother's moods, desires and temperament, as also by her ways of life. After birth the child imitates the parents, and for a considerable number of years entirely depends upon them for its growth".[2]

IMPERATIVES OF CHILD DEVELOPMENT

The pre-school age may be broadly divided into 0-3 and 3-6. During the earlier period his progress is so rapid, his needs so highly individual and changing, his health so delicate and his dependence on his mother, both for meeting his physical and emotional needs, so complete that it is neither possible nor desirable to separate him from his mother. How devastating can be the effect of the deprivation of the warmth of motherly love is dramatically demonstrated by the experiment of Fredrick II, who wanted to find out what language the children would speak if they heard nobody talk to them. All the children died. Without the loving communication of a motherly person, they could not live. "Separation of the toddler from his mother", says Almy, "it is believed has potentialities for almost as devastating effects as it has for the infant".[3] That is why there is a shift in the USA away from providing group experience for 2-year-olds in nursery schools and day-care centres. Many of them suffer so much separation anxiety that they are not able to benefit much from their peers. The thrust, therefore, in this age group has to be to improve the health and serenity of the mother through providing her nutritious food and health care, deep understanding and sympathy of other members of the family, especially the husband, and the education of the parents in regard to the process of child development and the way it is to be helped. Hence the close linking of adult education and pre-school education in Nai Talim. As Gandhiji said: "We must participate in the homes of the children. We must educate their parents".[4]

In the 3-6 age-group, while the child is still home and family tied there are strong reasons why the child should be sent to a nursery school. Firstly, the school can provide a safe environment for the child to test out his powers, which is characteristic of this age, under the supervision of an understanding adult who knows how to direct their strong feelings and impulses into constructive channels and to understand their imagination and fantasy as well as their need and desire to understand the real world. Most of the mothers because of their pre-occupations or emotional inadequacy or lack of understanding are not able to give all this to the child. Secondly, the child has grown beyond the self-centredness of toddlerhood and appears to be ready, in the company of a small number of his peers, for social understanding and co-operation. Thirdly, by the time he is three, he is able to exercise deliberate control over his behaviour and consciously begins to conform to the wishes of others. He has also built up sufficient vocabulary by now to be able to communicate with others. For both these reasons, the child is now fit to move in a group and can be moulded towards group behaviour. But these schools are to be peferred to the home only if they are really good schools, with a good environment and staff. It was the absence of trained women teachers, apart from difficulties of finance, which prevented the second Kher Committee from advocating pre-basic education on a compulsory basis. While Gandhiji felt that "under ideal conditions true education could be imparted only by the parents",[5] the conditions in Harijan homes were so revolting that he felt that for them at least we should provide pre-basic schools, aiming at the minimum of culture. He said: "Be it of the crudest manner possible, a non-Harijan child receives some home culture. A Harijan child, being shunned by society, has none. Even where, therefore, all primary schools are open to Harijan children . . . preliminary schools will be needed for Harijan children if they are not to labour under a perpetual handicap . . . . That preliminary training should consist in teaching Harijan children manners, good speech and good conduct. A Harijan child sits anyhow, dresses anyhow; his eyes, ears, teeth, hair, nose are often full of dirt; many never know what it is to have a wash. . . . "[6] The Zakir Hussain Committee also endorsed this view and felt strongly "the necessity of some organisation of pre-school education, conducted or supported by the State, for children between the ages of three and seven" in view of the "the rather unfavourable surroundings of poor village homes" and "uneducated and indifferent parents mostly struggling against unbearable circumstances".[7]

The Sewage: our experiment

So when Gandhiji extended the scope of Nai Taleem to cover the entire span of life—"from the hour of conception in the mother's womb to the hour of death"—in the Third All India Basic Education Conference at Sewagram in January, 1945, experimental work on pre-basic education was started in Sewagram under Gandhiji's direct guidance. Shanta Narulkar offered to work on the twin, inter-related projects of adult and pre-basic education. She has penned down her experiences in regard to pre-basic education in her book "Plan and Practice", published by the Hindustani Talimi Sangh.

The pre-basic school at Sewagram handled children of the 2½-7 age-group. The educational aim was to enable the child to control his emotions and practise self-restraint and obedience. His energies were to be directed in to constructive rather than destructive channels of behaviour. He was to be treated with love, sympathy and understanding. He was to be given opportunities of self-expression and self-revelation through constructive play.

Work and play

There is considerable confusion regarding the relationship between constructive activity or work and joyful activity or play for the pre-basic child. To him there is no artificial distinction between the two. To him all work is play in the sense that he enjoys doing it; and all play is work as he has a definite aim in every activity—whether he is imitating a carpenter, a potter, a bird etc. He is as serious as the original actors whom he loves to imitate. The only thing one has to guard against is not to impose an activity on the child. That, however, does not preclude clever suggestion by which a meaningful activity can become also his deliberate choice and consequently play.

The educational aims were achieved through simple activities, in which the members, including the children of a well-ordered household would engage in—cleaning the surroundings, having one's path, saying one's prayers, having a meal etc. The children enjoyed these activities. They were unobtrusively handled to make them educationally rich. For example, waiting for one's meal till prayer is over, or stand patiently for one's turn to take water from the common pot can inculcate self-control and discipline. Having a thorough bath, cleaning one's teeth, getting one's nails cut etc., are highly educative to children from filthy homes where bath is unheard of. The end result of all this was the improvement of the daily life of the children. They carried these habits home and the teacher's home visits and contact with the parents brought into being the school and home co-operation to the benefit of the child. The children also engaged in creative activities like dance, singing, art, dialogue etc. The stories stirred and satisfied their fantasy and imagination. The mathematical sense and the scientific spirit were also sought to be developed. The materials—water, sand, soap, palm leaves, bamboo sticks etc., were picked up from the environment and cost nothing. The activities were classified under five subjects: health and sanitation, food, water, creative activity and gardening.

As a result of three years of experimentation, the routine that emerged has been well set out in the 1947-48 annual report of the school. The most significant feature of the established practice was the manner in which the school and the home co-operation—so essential for the child's education at this age—was secured and how adult education was promoted through pre-basic education and vice versa.

One hour before starting the school, the teacher, along with such children as were ready to go with him, went to the homes of pupils and discussed with the parents the problems of health of their children, their cleanliness, food habits, etc. Wherever necessary, the teacher would lend a helping hand to the parents in bathing the child, combing his hair etc.—a help which was very much appreciated. The presence of neat and clean children going happily to school served to draw non-school-going children to school. Other occasions like festivals also enabled the school to gather the parents and increase the intimacy of the parent-teacher relationship.

As the new habits of the children got set, they insisted that their parents ought help them in keeping them up. Where the parent did not understand at first, the teacher would step in to explain the correctness of the child's insistence and their duty to send the child to school, neat and clean. A few instances given in the Report would indicate how effectively social transformation was taking place under the impact of the pre-basic school.

Vijaya's case shows how a Brahmin boy's parents were educated to send their child to a school where he would have to study along with Harijan boys:

> "Vijaya is a Brahmin boy, the son of the only Brahmin family of the village. Two years ago, he was then three and a half, he would watch from his doorstep the teacher on his daily rounds. The teacher would invite Vijaya to go to school, but the parents were orthodox and would not allow their son to attend a school where caste distinctions were not observed. Nevertheless, the tecacher when on his morning rounds, would ask Vijaya when he was coming to school. One morning as the teacher was on his round of the village with a few children and Vijaya was watching him from the doorstep, the teacher, preoccupied with his other duties, forgot to greet Vijaya. The mother was looking out eagerly and missed the daily greetings from the teacher.
>
> "Next day the same thing happened. The mother calling to the teacher said: 'Guruji, why did you not call Vijaya today. He has been waiting for you. Yesterday also you forgot to greet him and took no notice of him. He was so disappointed to see you going without a word.
>
> "The teacher replied smiling: 'I'm sorry I forgot to call him; he is always welcome, but you do not allow him to come, the poor child: What can I do? A mere invitation will not satisfy him', and the mother smiled at these words.
>
> "Next day Vijaya was again standing in front of his door, and the teacher passed by and asked him when he was coming. Vijaya hesitated for a moment, then, suddenty looking at his mother, shouted: 'Mother, I'm going to school', and off he went with the teacher. There was contentment in the teacher's look, while the mother could only gaze after her child and remain quiet. Next day, Vijaya brought his little bowl for his lunch with the other children in school. He is now one of the best

boys in his class, and the parents have become active helpers in the school." (pp. 59-60).

Another instance where a busy mother was 'educated' in the need for cleaning her boy before sending him to school:

"One day while going on his round of the village, the teacher heard much noise and shouting at a distance. When he reached the spot he found Ramu weeping helplessly: his mother was in a terrible temper. As soon as she saw the teacher, she began complaining. 'Look at this, Guruji, look at this child! As if I've no other work this time of the morning than to look after this little fool! Now he wants me to wash his mouth and bathe him; he'll go to school only after that. I'm telling him to get to school and there those teachers will do it all for him—but he won't listen to me. He deserves a good beating'. (p. 61).

"The teacher listened quietly. 'Mother', he said, 'Ramu wants his bath at home. Let me help him. Come on, Ramu', The child was happy and the mother cooled down. Then the teacher told her, 'You were in the wrong. You are his mother and it is your duty to look after your child. The teachers are there to help you if you need any help; but, as his mother, you must cook for him, you give him shelter, and so in the same way you should help him to keep himself clean and healthy, to teach him good habits, then send him to school. Once he knows how to take care of himself and how to do things, he will not take much of your time. I can always come to help you. Whenever you are too busy, just send for me.

"The mother saw the joke and laughed. 'Why', she said, 'are you going to help me in my work?'

'Yes, why not!' replied the teacher, 'but not always; only when you are too busy.'

"At this the mother was appeased, and promised to send her boy clean and neat to school from that day."

Many such instances could be quoted to show how the Sewagram society was quietly being transformed under the influence of the teacher and the reformed boys and girls.

Another very interesting device adopted to bring the school and the community together was that of the "moving school".

Taking advantage of the Kasturba Gandhi Week from February 22 to March 2, and the presence of the trainees in pre-basic education, the teacher started the day with a visit to the homes of children. Many children also joined. The procession moved on with the singing of songs. Three trainees formed three groups. Each group became a class of children of the pre-basic school. The children were cleaned—their faces washed, their hair combed and their nails cut etc. The children suffering from diseases were sent to the child welfare centre, opened by the Kasturba Hospital in the Sewagram village, along with their parents or older children. Then there would be prayers, Ram Dhun and singing of Bhajans. The children learnt songs, stories, games etc. The programme was carried out in some public place where the mothers collected for some daily duty, as the village well. 'The mothers', says the report, 'observed our work and some were ready to help us.' So the mothers also learnt something about cleanliness and the care of the child at home'. This programme of fiteen days—each day from 7 AM to 9 AM—led the people to respect the work, the children enjoyed it and their example brought many more non-school going children to school.

Another link between the school and the home was that when a child was ill his milk, which he would have got at refreshment time if he had come to school, was sent to his house.

To cope up with the problem of younger children—who had to be looked after by the slightly older children when the parents went to work—was solved by permitting them to bring the younger children to the school along with them.

There was no direct teaching of the 3 R's. But the children picked up rudiments of language and arithmetic in connection with the activities they engaged in—for example, counting the number of children while distributing milk. The children of 5 to 7 could count up to 20.

The children learnt the writing of letters as drawing of pictures. In regard to language it is stated: "they know the names of their parents and their villages. They can use sentences containing words denoting work; they have learnt the names of the seasons and the signs of changes in nature". They learnt songs and stories. The children observed natural phenomena and learnt some science through it. The curiosity of children in regard to nature was encouraged and promoted.

The children learnt to play games and team work through them. They also engaged in art work—drawing, painting, dance and song.

Other activities included spinning and gardening. Finally the question that comes to one's mind is in regard to the teacher that a pre-basic school in a village requires. The Sewagram experiment's answer is as follows:

'He should be of amiable disposition, affectionate by nature. He is not going to the village for any fixed work; he is going there to be a friend and helper, a guide and a servant, a worker and a teacher for every child in the village, whether the child comes to his school or not. He should be able to change the atmosphere in the village by his mere presence. He is going there to convince the perents and adults about their duties and responsibilities as adults and citizens by his own example. Therefore, he must attempt to lead an exemplary life himself.'

"The importance of the Sewagram experiment lies in the operational success of a principle, namely that when a child enjoys what it does, and when what it does is natural to its environment, knowledge is easily and permanently described and a potential citizen of some value has been brought into being".[8] While the principles of pre-basic education are in line with modern pedagogic principles, its two distinctive features are that it is indigenous and related to the child's environment; and it is cheap and so within the means of the country.

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EIGHT

BASIC EDUCATION

I

CHALLENGE AND RESPONSE

While Gandhiji believed in life-long education, it was with basic education for children of the age group 6-14 that he really began while presenting his picture of a national system of education to the country. For it was here that he had to face the challenge of either scrapping prohibition or forgetting about universal primary education when the Congress governments assumed power in most of the Provinces in 1937 under the 1933 Act. His response was characteristic. "The cruelest irony", he said, "of the new reforms lies in the fact that we are left with nothing but the liquor revenue to fall back upon in order to give our children education. That is the educational puzzle, but it should not baffle us. We have to solve it and the solution must not involve the compromise of our ideal of prohibition, cost whatever else it may. It must be shameful and humiliating to think that unless we got the drink revenue, our children would be starved of their education. But if it comes to it we should prefer it as a lesser evil. If only we will refuse to be obsessed by the figures and by the supposed neceesity of giving our children the exact kind of education that they get today, the problem should not baffle us". The education he advocated instead was called Basic Education—a life-centred, problem-centred, self-supporting education, centring round rural handicrafts. Let us see to what extent it was in keeping with the imperatives of child development.

II

IMPERATIVES OF CHILD DEVELOPMENT (AGE-GROUP: 6-14)

During this period the child becomes fit for much more organised co-operative and real activities. Group life becomes important and the opinions of the peer group become all important even more important than those of adults. Hence well-organised group activities which help to develop healthy, progressive and constructive group attitudes, are the most potent educational tool. To establish their credentials with the children, the teachers and the parents must try their best to understand and sympathise with the group opinion and the assertion of the group identity and participate to the extent possible in their activities. These activities, when used as deliberate educational tools, should be self-managed by the pupils and guided by the teachers unobtrusively to the maximum possible extent. The children and not the teacher should be at the centre of the stage.

The prime interest of the children at this stage is in physical activities. This is the time for the perfection of manual skills and most children, especially during 9-12 years, show increased manual dexterity, strength and endurance. Special emphasis is needed on skilful activities for "the development of coordination and rhythm" of the body. Hence the importance of an activity-centred and skill-development oriented education.

The importance of the right posture at this stage, when the vertebral bones and ligaments are relatively malleable, also needs to be underlined. For wrong postures can lead to permanent distortions in the spine. Insistence on the right posture in craft and other activities provides valuable opportunities for correlating this need with the physiology of the body, especially the skeleton.

The continuing importance of nutrition, especially milk, in view of the continuing process of ossification, needs to be underlined. The science of food becomes a natural subject of correlation with a mid-day meal programme for even the non-residential children in a basic school.

Socially, the child begins to learn during this period "the skills, the customs, the traditions, and the prejudices of the culture in which he lives". Distortions of personality due to unfavourable environment—the income level of his family, the occupation of his father, the house he lives in, the religion and caste he belongs to etc.—especially in the case of the weaker sections, have to be prevented by providing the child in school a healthy, full-blooded social life, which emphasises equality, striving, values etc. The school thereby should help the peer group to develop these attitudes and values and proclaim in their world their "judgement" on what is right and what ought to be. All this calls for a life-centred, value oriented education by teachers, who live what they teach. For the children are sharp enough to understand and learn not only what is directly stated or taught but also the subtle nuances of the actions of their teachers.

Mentally, the ego of the child gains inefficiency and complexity. He understands the reality and his own impulses and desires and knows how to control and direct them to cope with the reality. His ego, develops in all its functions of knowing, doing and selecting. And the child has the capacity to understand a situation, to act therein and decide on his own course of action. He is mature enough to "play" with reality, with real life situations. Any education that pushes him further in more effectively grappling with reality increases his confidence and improves his self-image, which is his most important mental need.

The child is further able to strike a balance between his own desires and impulses on the one hand and the demands of the adults and his peer group on the other through the "synthetic" function of the ego. So he is prepared for his social role and adjustment necessary therefor between the demands of the individual and that of society. Hence he is ready for training in citizenship.

It is a period of tremendous intellectual growth. The child is able to form concepts and generalise. He has the capacity to reason and solve problems, which is considerably helped by his skills of reading and manipulation of numerical mumbers. These skills are helped and pushed forward if related to the experience of the child, which also helps understanding and retention. So this is the period for the inculcation of the scientific temper and for development of reading and numerical skills; and calls for a problem-centred, activity-centred educational approach.

The child develops a more flexible conscience and is ready for being helped to evolve a more mature understanding of human conduct and the compromises required therein for effective social living. This trait and capacity can be developed further only through community living, on which education should, therefore, centre.

Strong feelings are another characteristic of this period and they need to be understood and directed towards worthwhile goals, built round great personalities, and the idealism of the child stirred. Strong feelings are an important ingredient in personality development. If these feelings are not understood and properly directed, the child may find it difficult to absorb the shock of many jolts that he receives at this time—from home to the school, from completely possessed parents to a shared teacher, etc.—and develop serious anxiety, showing itself in aggressive behaviour or withdrawl, upsetting dreams etc.

Erikson defines the central conflict of this period as that between accomplishment and inferiority. If the child is enabled to have a sense of accomplishment by the handling of tools and developing skills required in his culture, he may develop into a good worker, a potential future provider for his family. If not, anxiety overpowers him and his sense of inadequacy turns him into a frightened child. There are three main institutions which can help or hinder, unwittingly, his development of a healthy self-image: the school, the family and the peer group. The school should have a varied curriculum—a series of varied activities suiting different temperaments, so that every child has a fairly equal chance to succeed. That is not possible with a narrow curriculum. An appreciative attitude of the teacher is extremely important. Even criticism, where necessary, has to be within the over-all framework of appreciation. He should be especially watchful for any sign of anxiety due to a feeling of inadequacy growing up in any child. The second agency is the family, whose affection and security the child still requires in spite of his rejection of the adults. His recalcitrance has, therefore, to be met with understanding and sympathy and a watchful eye kept on his attempts to grow on his own so that he can be saved from danger when it comes. The child needs "security with freedom to grow". If adult opinions are shared with the child and not foisted on him, he carries them to his peer group, which narrows the gulf between his adult world and his all important world of the peer group, thereby enabling the adults to unobtrusively guide the peer group into healthy channels. The third agency, perhaps the most powerful at this stage, is the peer group. The group has to be a friendly group engaged in activities based on common interests of children, presenting challenges and opportunities and helped to achieve. Such a situation makes a child happy and encourages his healthy growth. To organise such groups is an important task of the educationist.

It will be seen that the imperatives of child development are the guiding principles of basic education, which is based on group and community life, consisting of a large number of simple activities by the children themselves. They offer both challenges and opportunities for all-round growth, unobtrusively helped but not dictated and controlled by the adults.

III

COMPULSION

While Gandhiji pronounced on all stages of education, it was the experiment of Basic Education that was more thoroughly worked out than any other stage during his lifetime and posed problems of detail to which Gandhiji suggested his own solutions. Some of the issues that emerged and Gandhiji's reaction thereto are given in the paragraphs that follow. The first issue is in regard to compulsory primary education.

In most countries, compulsory primary education is regarded as an absolute necessity. Gandhiji, however, was opposed to compulsion in education, as in everything else, as a form of violence. He said: "All compulsion is hateful to me. I would no more have the nation become educated by compulsion than I would have it become sober by such questionable means. But, just as I would discourage drink by refusing to open drink shops and closing existing ones, so would I discourage illiteracy by removing obstacles in the path and opening free schools and making them responsive to the people's needs. ... If the majority wants education compulsion is wholly unnecessary. If it does not compulsion would be most harmful. ... Nothing is more detrimental to the true growth of society than for it to be habituated to the belief that no reform can be achieved by voluntary effort".[1] He felt that under Swaraj he "should resist compulsory education at least till every effort at voluntary primary education has (had) been honestly made and failed".[2] In view of such strong views on compulsion one wonders how Gandhiji acquiesced in the Zakir Hussain Committee's Report advocating free and compulsory basic education for the children of 7-14 years. Was it that he had mellowed down with years on this issue? Or was it—what is more probable—that he did not force his views on his co-workers, as later in the case of the Partition of India? Or did he know that compulsion would always remain—as it did remain—more on paper than in reality?

IV

AGE OF ADMISSION AND AGE-RANGE OF BASIC EDUCATION

The Zakir Hussain Committee recommended 7+ as the starting point of compulsory education as before that, they felt, the child was not mentally and physically fit for craft work and "the essential modicum of social civic training". The Central Advisory Board of Education,[3] however, decided on 6 as the admission age in view of the general practice in India and advanced countries, and even 5-year olds were not to be denied admission, if they desired it. Gandhiji advocated a more flexible approach to take account of the different rates of development of children. He said: "Seven should be the average minimum age, but there will be some children of a higher and some of a lower age as well. There is physical as well as mental age to be considered. One child at the age of seven may have attained sufficient development to handle a craft. Another one may not be able to do so even at 8. One cannot, therefore, lay down any hard and fast rules. All the factors have to be taken into consideration".[4]

In regard to the upper limit of the age of compulsory education all were agreed on 14 years. A period of 7-14 was required "to ensure that (1) he will receive the essential modium of social and civic training . . . (2) he will become a better citizen, (3) his literary training will be thorough enough to make a lapse into illiteracy impossible, and (4) he will acquire sufficient skill in his basic craft to practice it successfully if he adopts it as a vocation".[5] If it were feasible, they would have liked even to extend this age of compulsion for educational reasons to 16.

V

A UNIFIED COURSE OF 7/8 YEARS

Another controversy arose whether the 7 or 8 years of compulsory education should be in the same institution and a continuous, integrated course or there should be a well-defined break at 11+, after which students should scatter into differentiated courses as advocated by the Hadow Report in England. The protagonists of basic education were of the former view, while the latter view taken by the CABE prevailed henceforth in government policies and programmes. The net effect of this was that there were 5-year Junior Basic Schools, which—deprived of the leadership of the senior 3 classes, which were organised separately—became a truncated and ineffective unit, socially and economically. It adversely affected the organisation of the school as a community, which is one of the main tools of education. Nor could such a unit be self-supporting. On the other hand the senior schools started drifting away from the values inculcated in the earlier stage. Pressure for the introduction of English at this stage mounted, and the gravitational pull of the existing system—many of the children were supposed to go into ordinary schools after class V—into which the senior basic school boys were supposed to fit, considerably weakened the momentum of the new habits, attitudes and values given at the earlier stage. So instead of the higher stage being modified to receive the products of the new schools, the new schools were being diluted so that the product could fit into the existing system, which was supposed to remain unchanged. This was the end result of all the tall talk of fitting the content and methods of education to the mental and physical changes taking place at 11+. It ended in destroying the vital elements of the new educational reform. The first unit was too short to firmly fix the new habits, attitudes and values. The second one suffered by a sudden change in the atmosphere. Some of these boys went to English dominated schools, linked to the university, and in the existing hierarchy of social and economic values were preparing themselves as the elite. Those who remained in the Senior Basic Schools thus got demoralised. So the dream of Basic Education to create a classless society received a death blow. So the single unit of 8 years—where the first five years did the ground work on which the last three years completed the building so that their roles were complementary and mutually reinforcing—got cut into two separate parts, the one without the branches and the leaves and the other without the roots. This is what happens when educational reform is not treated in a perspective of total socio-economic goals. Too facile borrowing from the West further distorts the picture. The Hindustani Talimi Sangh was, therefore, quite categorical about no English teaching in any schools "till the students have (had) acquired a regular education for seven years through their mother tongue"[6]; and an uninterrupted course of seven, later raised to 8 years: "For educational as well as financial reasons, the Sangh feels convinced that the duration of basic education should in no case be reduced to less than eight years".[7] And the irony of the whole situation was that it was subsequently established that 11+ was too early for any sharp differentiation of courses and 14+ was a more reliable point from this angle.

VI

THE CURRICULUM

The Zakir Hussain Committee, which was entrusted with the drawing up of the curriculum for Basic Schools, selected the following subjects for inclusion in the course of studies: the basic craft, the mother tongue, mathematics, social studies, general science, drawing, music and Hindustani. The time allotted for each subject was as follows:[8]

Subject	*Time*	
	Hrs.	Minutes
Basic Craft	3	20
Music, Drawing and Arithmetic	0	40
Mother tongue	0	40
Social Studies and General Science	0	30
Physical Training	0	10
Recess	0	10
Total	5	30

The Basic craft

It was the central medium of education, the pedagogic, social and economic importance of which has already been dealt with in the chapter on "The Philosophy of Nai Taleem". The methodology has been dealt with in a separate chapter. Here we will deal with certain issues which arose in the course of implementation.

Firstly, people objected to the time given to the basic craft. It would not leave sufficient time for the other subjects, forgetting that much of the other subjects would be taught through the craft. The craft was not a subject in the usual sense of the term but a centre of interest—a focus of integration for the various subjects. Nor would it bore the students. For the time allotted to craft was to be used for correlated studies as well. As the Zakir Hussain Committee explained, "The time allotted to the basic craft is not meant to be spent on the mechanical practice of the craft, but oral work, drawing and expression work naturally connected with it, as well as instruction in the why and wherefore of the processes involved, i.e., their scientific and intelligent understanding, which is an important educative aspect of craft work, will also be given during this time".[9]

Again, the time allotted represented the outside limit and within it the time given varied with the craft and the standard and age of the boys.

Secondly, many educationists were in favour of a number of varied crafts and other activities in the earlier stage leading on to a single productive craft instead of a single basic craft from the beginning. It was felt that a single craft in the early stages would be an adult imposition on the varied and varying and fast changing interest of the child whose predominant instinct was play and "creativity" rather than production. There were a number of fallacies in this stand. Play[10] and joyousness are not reduced if the child's instinct is guided into purposeful activities instead of frivolous activities. And production is not less creative for being more meaningful and commanding a price. As a matter of fact having produced something which has a market value improves the self-image of the child. And there is considerable variety in the processes of a single craft to provide variety to the child and prevent his interest from flagging. As Gandhiji said: "There will be newness in every lesson just as there can be new music on the same instrument. By changing over from one craft to another a child tends to become like a monkey jumping from branch to branch".[11] Moreover, while the basic craft is the main centre of interest for the correlation of knowledge and will require the utmost concentration of knowledge, it is by no means the only activity in a school, which is a bee-hive of activities comprehending the entire community life. Ultimately, as Gandhiji said, as basic schools had "to make provision for all they need",[12] agriculture and many other crafts were bound to come in, without disturbing the central position of the basic craft. From the organisational and financial points of view also—it would be difficult to have many craft teachers for a school, with the requisite skill, as well as to provide many workshops. Such an approach would be brave words ending in a whimper. Building up correlation capability in regard to one craft will also be more manageable than for many crafts. Therefore, Gandhiji was of the view: "... one school will not teach many crafts. The idea is that we should have one teacher for twentyfive boys and you may have as many classes or schools of twentyfive as you have teachers available, and have each of these schools specializing in a separate craft—carpentry, smithy, tanning or shoe-making."[13] Again, as the aim of the basic craft is to develop during the basic course sufficient skill as can enable the boy to earn his livelihood thereby at the end thereof, that is possible only if the boy concentrates on one basic craft instead of dividing his attention among many. Also as the aim of craft work is the development of the power of observation and an eye for detail and the promotion of the interaction of the child's mind with the environment—these qualities are much more likely to be developed when one thing is looked at carefully rather than a large number of things with divided attention. That requires concentration, which in turn requires limitation of area. Energy resources should not be spread too thin.

While any craft rich in educational possibilities—offering many points of natural correlation of knowledge—economically productive, and suited to the local environment could be a basic craft, Gandhiji gave the pride of place to spinning and weaving. This aroused perhaps the maximum controversy. It first of all meets a universal basic human need. It is a must for the poor. For without it they go naked. And when all join in this activity, they establish their links with the poorest of the poor—a gain of no mean importance. Khadi, said Gandhij, was the best "all-round village industry" and could best be universalised. And, he said: "Any basic craft to serve as a medium of education must answer the test of universality". He was not deterred by the fact that cotton was today not grown everywhere. If England which did not grow a pod of cotton could export textiles to the whole world, why could we not be able to import cotton from neighbouring provinces or districts to introduce home spinning. We could also be able to develop our potentiality for growing cotton everywhere. For "There is no part of India where cotton was not at one time grown."[14] To introduce spinning in every home he would introduce it as "a compulsory subject" in every national school. For "Once our boys and girls have learnt the art they can easily carry it to their homes". He strongly felt: "Just as we cannot live without breathing and without eating, so it is impossible for us to attain economic independence and banish pauperism from this ancient land without reviving home spinning. I hold the spinning wheel to be as much a necessity in every household as the hearth. No other scheme that can be devised will ever solve the problem of the deepening poverty of the people".[15] That is why the Zakir Hussain Committee recommended that even where local conditions made it necessary to have another industry as the basic craft, "pupils will be expected to attain a minimum knowledge of carding and spinning with the takli and a practical acquaintance of elementary agricultural work in the local area".[16] Agriculture was another mass industry which every one must learn to share the life of the people. He said: "It seems to me that in our country where 35 per cent of the population is agricultural and perhaps 10 per cent occupied in supplying the wants of the peasantry, it must be the part of the training of every youth that he has a fair practical knowledge of agricultures and hand-weaving".[17]

Secondly, spinning develops finger skills as nothing else does. Addressing the educationists in Patna a few months before his death he said: "Some people ask me why agriculture could not be a basic craft. The answer is that it has not the educational potentialities of spinning. It cannot, for example, develop deftness of the fingers as can spinning. The function of Nai Taleem is not merely to teach an occupation but through it to develop the whole man".[18] And again: "It (spinning) is a daily practical lesson in "patriotism, useful toil and giving. That a boy should begin giving even during his education without expectation of return is an object lesson in sacrifice he will not forget in after life".[19] Again, clothing oneself through self-effort, "when the alternative is to go naked is in itself an education. An intelligent pursuit of the various processes related to cotton spinning has, besides, a very high instructional value. In fact it covers the whole education of man as no other craft does".[20]

Another advantage of spinning is the extreme cheapness of the equipment required. Each child can make his own bamboo takli with a few paisas. Nor does it require land, which is scarce, as does agriculture.

In regard to self-support, as applied to this stage, Gandhiji clarified that it was possible to pay[21] the salary of a teacher through the sale of the products of children, taking the school of 7 or 8 years as a whole, and secondly, if the State took over what the children produced. The results in some of the well-run, full-fledged basic schools showed very encouraging results even in the early stages of the experiment. The results of spinning and weaving in the Sewagram Basic School have been cited earlier. If designing and dyeing could be added the results would be still better. Anybody who has any doubt has only to go to Khadi Gram Udyog Bhawan at New Delhi and see the rush of customers to convince himself. Further, with imagination and resourcefulness the wastage of material taken for granted in earlier classes can be considerably reduced, if not altogether eliminated. In the Sewagram Basic School, for example, the yarn spun by class I was made weavable by doubling and twisting. Again, if all the services the basic school renders to the local community could be estimated in monetary terms, the net cost of basic education would be considerably reduced and the self-supporting aspect would get a new dimension. The capital expenditure in buildings and equipment was to be met from State or private sources. In line with his general thinking, one can say that he would have preferred private sources—preferably local community effort—to the maximum possible extent.

The Mother Tongue

The role of the mother tongue as the means of understanding and appropriating our rich cultural heritage, as a tool of communication, necessary for effective living in the present and as the medium for creative expression is duly emphasised by the Zakir Hussain Committee. Its special feature in the basic curriculum is the manner in which it is closely correlated to effective daily living. Secondly, Gandhiji laid the utmost emphasis on education through the mother tongue at all stages of education and emphasised the need to enrich it by identifying the rich idioms and expressions in our Indian languages, by promoting their mutual interaction and by borrowing technical terms from Indian classical and foreign languages. The content of our literatures should also be enriched through translations from other languages and literatures and it would be a good strategy to set apart a class of scholars specifically for this task. There was no justification for mass of the people to learn everything through the English language, which was a tremendous waste of national energy, apart from other attendant evils, especially the inferiority complex it bred in our people in regard to our own languages. Gandhiji "would not have a single Indian to forget, neglect or be ashamed of his mother tongue, or to feel that he or she cannot think or express the best thoughts in his or her own vernacular".[22]

Thirdly, the emphasis was on developing the capacity of self-learning through specifically emphasising the skill to use dictionaries and reference books, list of contents and index and in general to use the library for collecting the desired information.

Mathematics

The aim of the mathematics curriculum is to develop "the reasoning capacities of the pupils",[23] through solving of numerical and geometrical problems arising in connection with craft work and community living, both in the school and the environing community.

Social Studies

The objectives of the Social Studies syllabus were:

"(1) To develop a broad human interest in the progress of mankind in general and of India in particular.
(2) To develop in the pupil a proper understanding of his social and geographical environment, and to awaken the urge to improve it.
(3) To inculcate the love of the motherland, reverence for its past and belief in its future destiny as the home of a united co-operative society based on love, truth and justice.
(4) To develop a sense of the rights and responsibilities of citizenship.
(5) To develop the individual and social virtues which make a man a reliable associate and trusted neighbour.
(6) To develop mutual respect for world religions".[24]

The aim of the Social Studies syllabus was to create in the child an understanding of his social environment and bring him into dynamic interaction with it so that he gets filled with the urge to improve it with a knowledge of its heritage and its future goals. This is to be done through the imparting of knowledge and the development of right attitudes and values. For the purpose: the teaching of the various subjects covered under this head—history, geography, economics, civics etc.,—should be "closely coordinated". It should also "spring from actual social situations—the child's home, his village, its occupations and crafts—and then be extended and enriched by stories of primitive life and ancient civilisation, and by showing how different ways of life and work have developed under different social and geographical conditions".[25] The starting point of the various studies was the immediate environment, which was to lead progressively to the national environment in a world perspective.

Life in the school was to comprehend the present social reality as well as the future goals. It was to be an improved version of the life of the environing community, so that the school could become a centre for socio-economic extension services to the community. The Zakir Hussain Committee said: "Such a close relationship of the work done in the school to the community will also enable the children to carry the outlook and attitudes acquired in the school environment into the wider world outside".[26] That way the children would get trained as agents of the social revolution that Gandhiji worked for—a revolution to bring into being a social order based on truth, social justice, self-help, co-operation, ideals of social service, etc.

These objectives were sought to be realised through the organisation of the school as a democratic, co-operative community, where everybody had his rights and responsibilities. The principles of self-help, co-operation, truth and justice were lived to realised. We get a glimpse of how this was done in the Sewagram Basic School from what Asha Devi, the Directress of the Sewagram Educational Complex, said:

"We have not only to help the child to grow as a complete all-round individual but also as a responsible member of society, and this training has to begin from the beginning of the life in school. In fact, that is the main function of education. So we help the children, as far as possible, to organise the life of the school into a kind of co-operative community where every member, teacher or child, big or small, has his own duties and responsibilities which he must discharge. The duties and responsibilities are not imposed upon him by us. The children themselves choose their leaders and all this organisation of their activity is centred round the children's meeting, which they call *mulamchee sabha*. Every Saturday morning the children meet. It is a solemn democratic body, where duties are distributed, ministers are elected, the last week's work is criticised, the next week's is planned, the budget for the next week is prepared and certain children are entrusted with the marketing of their products. I would now like to give you a list of the ministers and their duties. First comes the minister for cleanliness of the compound and cleanliness of the classroom. Then the ministers of food,' ministers who are responsible for organising the meals and upkeep of the kitchen. Then come ministers who distribute the *taklis* and winders, spread the mats, collect the material after the school work is over, and who are in-charge of their little school equipment in the shape of slates, pencils and paper. Besides, we have a minister for organising their games, a minister who looks after the kitchen garden, a minister whose duty is to see that the elder children do not bully the younger ones. Lastly a minister for lice. This is an important portfolio. These are the lines on which the community is working and the organisation of work and play in the school is entrusted to the school children. We are there only to help them and guide them when they need it. They organise their play, class work and all their activities. After six months' experience we have found that they can be trusted as responsible members of the school community; they can be trusted with money, to organise festivals, and to entertain the villagers.

"But the civic training goes deeper, for the children are not only members of the school community: they are members of the village community; . . . The first stage towards the correlation of the village and the school was through the festivals. The children on their own initiative, organised two school festivals: one was Ganesh Utsav, and the other Janamashtami. To these festivals they invited the villagers; they had music and worship and they distributed Prasad".[27]

General Science

In view of the importance of science in the modern world it occupies a central place in the basic curriculum. A spirit of enquiry, an attitude of rationality, an itch for experimentation etc.—which are of the essence of the scientific temper—have to be inculcated in regard to every activity. Nothing is to be done mechanically, insisted Gandhiji again and again. Everything was to be done scientifically. Incidentally, that also explains the comparatively short time allotted to Social Studies and General Science because both these subjects permeate the entire life and teaching in the Basic School.

Specifically, the objectives of General Science laid down by the Committee, were:

(1) To give pupils an intelligent and appreciative outlook on nature. To form in the pupils the habit of accurate observation and of testing experience by experimentation.

(2) To enable them to understand the important scientific principles exemplified in

  (a) the natural phenomena around
  (b) in the application of science to the service of man.

(3) To introduce them to the more important incidents in the lives of great scientists whose sacrifices in the cause of truth make a powerful appeal to the growing mind".[28]

The material from the various natural sciences was selected with a view to its applicability to practical problems in the local environment; its potentiality to encourage the development of scientific habits of observation, enquiry, experimentation etc.; and finally, to its capacity to inspire an undying dedication to the discovery of truth.

The Committee, however, did not include sex education as a part of General Science except to emphasise the "purity of life as a preservative of health".[29] For Gandhiji felt that, as in other subjects, only the experts of the science of sex—who knew how to control and sublimate it—should teach it; and the Committee felt that such men were not available. "Sexual science", he said, "is of two kinds: that which is used for controlling or overcoming the sexual passion and that which is used to stimulate and feed it. Instruction in the former is as necessary a part of the child's education as the latter is harmful and dangerous and fit therefore only to be shunned".[30] After twelve years of work the Hindustani Talimi Sangh had the following foot-note, on pp. 21-22 of Basic National Education, 1952, to 'The reproductive system' in the curriculum of Grade VI (age 11 to 12 years):

> "It is desirable that the subject of sex and the elementary facts of reproduction should be presented to children in a simple, objective but reverent manner before the physical and emotional developments of adolescence take place. Questions about the origins of babies are commonly asked by much younger children, and if these are frankly and naturally dealt with as they arise, children of Grade VI age are ready to be given sufficient knowledge and (what is at least equally important) the reverent attitude of mind for clean living during adolescence. No rules can be laid down, for it is imperative that each teacher should approach the subject in the way most natural to him (or her) and most suited to the circumstances of the children. Questions arising from births at home or from the observation of plants and animals at school and in the village often make a natural starting point. Two principles, however, should be kept in mind:
>
> 1. Sexual information should not be given an artificial or morbid interest by being treated as different in kind from any other piece of biological knowledge. A matter of fact, natural attitude is helpful, the children should take this biological knowledge as much 'for granted' as their knowledge of (say) the processes of digestion and excretion.
> 2. On the other hand, children must not be given the impression that man is merely an animal and may behave like one with impunity. The functions of sex make

possible the privilege of home and family life; they must be treated with reverance and a sense of responsibility in preparation for one's place in society".

Drawing

The importance of drawing is considerably increased in the Basic School. The objectives of training in it were to train the eye in the observation and discrimination of forms and colours; to develop a sense of the beautiful in art and nature and to develop the capacity for tasteful design and decoration; to develop the capacity for making drawings of objects to be constructed as well as for designing; and to give practice in scale drawing, making graphs and pictorial graphs. While in the early stages drawing was to be correlated to reading, natural study and craft, in the higher stages it was to be pursued more as an artistic activity, with emphasis on design and decoration.[31]

Music

In music, the objective was to create an appreciation of beautiful music through group and choral singing of carefully selected national, folk and devotional songs, and to fully utilise the educational potentiality of music the content and the melody both were to be emphasised. Group and choral singing was to be encouraged during craft work, physical training etc. The sense of rhythm was to be introduced in every activity like walking etc. The students were to be introduced to the main Indian Ragas and Talas.

Hindustani

Gandhji felt that Hindustani, the amalgam of Hindi and Urdu, "neither highly Sanskritised nor highly Persianised" and written in both the Nagri and Persian scripts, should replace English as the national language of India.[32] So the Zakir Hussain Committee recommended its study as a second language (where it was not the mother tongue or the regional language) in all Basic Schools. Where it was not the mother tongue or the regional language it was not to be taught normally till Grade VI. The detailed syllabus was to be "drawn up for each region to suit local conditions."[33]

Experimental approach

The approach to the curriculum was, however, experimental, as it was bound to be in the case of a scheme of such radical reconstruction of the educational system. The Zakir Hussain Committee said: "A syllabus of this kind which aims at far reaching construction of educational practices, really requires a background of fairly extensive experimental work on the lines indicated in our Report" and so they wanted the curriculum recommended in the work to be regarded as "a tentative scheme".[34]

Standard to be attained

The standard to be attained, Gandhiji, while placing the scheme before the All-India National Education Conference in 1937, defined as follows:

"The course of primary education should be extended at least to seven years and should include the general knowledge gained up to the matriculation standard less English and plus a substantial vocation". This was on the basis that as what happened in 9th and 10th classes was mostly redoing in English what had already been done in an Indian language and as English was not to be taught, the whole course of studies could well be completed within 7/8 years. In the absence of any experience of working the scheme of New Education, the standard could be laid down only in existing terminology and could be laid down only tentatively.

After an experience of nearly twelve years of work the Hindustani Talimi Sangh reconsidered the standard to be attained and the detailed curriculum in the light of the objectives of Nai Taleem and published them in the 1952 edition of Basic National Education. The curriculum is no longer defined in terms of the traditional subjects but largely in terms of the problems of living under the seven major heads:

1. The capacity for clean and healthy living. This will include:

   A harmoniously developed body, healthy and agile, capable of doing hard physical work. Right and regular habits of health and cleanliness, a high standard of personal hygiene and an understanding of its social and moral aspects. A properly developed sense of community cleanliness, and a knowledge of the fundamental principles of village sanitation. The capacity to organise programmes of cleanliness for house, school, and local community. Elementary knowledge of the organs and functions of the human body, the fundamental rules of health, and the principles of a balanced diet (carried out with locally available foodstuffs). A knowledge of simple first aid, common local medicinal herbs, and the cause and prevention, treatment and nursing of common ailments.

2. The capacity for self-reliance in food, clothing, and the repair and maintenance of ordinary buildings and tools.

   This will include:

   —The ability to produce cloth from raw cotton.

   —The ability to grow sufficient food for one's own consumption.[35]

   —The ability to cook a simple meal.

   —Knowledge of the principles and processes connected with the storing, cooking and serving of food for a family or a community, including budgeting and maintenance of kitchen accounts. Knowledge of the use and care of common household tools. The ability to ride a bicycle and to keep it in good order including simple running repairs.

3. This capacity for self-sufficiency through a selected basic craft.

   This will involve the attainment of knowledge and skill sufficient to enable the pupil if necessary to earn his own living (i.e., balanced diet, simple clothing and other minimum needs) through the practice of the craft.

4. Acquaintance with the fundamental scientific, mathematical and mechanical principles as they are exemplified in the phenomena of nature and activities of ordinary life. This will include:

—An elementary knowledge of mechanical and mathematical principles involved in the use of tools and equipment connected with the basic and other crafts. An acquaintance with the physical, chemical and biological principles involved in growing food and cotton, in cooking and other household arts, in the processes of the basic craft and in the maintenance of health and the provision for proper sanitation.

5. Capacity for the responsibility of citizenship. This will include:

—An understanding of the ideology of a co-operative social order, and ability to work co-operatively with other people. An understanding of the benefits of a decentralised economy based on regional self-sufficiency and the practice of cottage industries, and of the nature of a healthy relationship between village and town.

—An elementary knowledge of the place and value of co-operative societies and the principles involved in their organisation. An elementary knowledge of the economic, social and political problems of India and the world as gained through the intelligent study of newspapers and magazines. An elementary knowledge of the geography and history of India and the world, especially insofar as it is necessary to the understanding of present conditions. This should include knowledge of the founders and teachings of the great world religions, and the religious, social and historical significance of the fairs and festivals locally celebrated.

6. Sufficient mastery over tool subjects such as language and mathematics to enable the pupils to carry on their daily activities efficiently and to further knowledge after the completion of the basic course.

This will involve, in language:

—The ability to speak clearly and with reasonable fluency in public and school assemblies on subjects of practical importance in the school or village community. The ability to express ideas clearly and accurately in writing, and to draw up a well-planned report.

- The ability to speak, read and write simple Hindi, when this is mother tongue.
- In Arithmetic, accuracy and reasonable speed should be attained in the following processes related to the needs of actual life:
  - The significance of numbers.
  - The four fundamental operations (addition, subtraction, multiplication and division) applied to common weights and measures, money, time and distance.
  - Practical mensuration.
  - Elementary account keeping.
  - Use of the unitary method, the rule of three, ratio and proporation, problems in speed and work.

7. The capacity to appreciate true art, form good taste, entertain the community and use leisure time with profit and pleasure. This will include:

- An acquaintance with good literature in the mother tongue.
- An acquaintance with some good examples of pictorial and plastic art, and experience of self-expression through drawing, painting, clay modelling etc.
- A knowledge of some good music, classical and traditional, and ability to sing devotional and national songs in chorus.
- An acquaintance with the traditional decorative arts of the locality, and the power to discriminate between good and bad taste in the adornment of the person and the home.
- Some experience in helping to organise dramas, festivals and other cultural activities for the school and the local community.

Note: In the detailed syllabus which follows, the division of work trade-wise is suggestive not obligatory. The syllabus is an elastic one. It indicates the amount and kind of knowledge that should be acquired by the end of the eight years course, and the subject-matter has been arranged in an order roughly corresponding to the increasing maturity of the children. In cases where the average of a class is much higher or lower than that indicated here parts of the syllabus may have to be modified accordingly. Other modifications will no doubt be made to suit actual circumstances. Throughout it is expected that in the course of daily school life there will be frequent reference back to material dealt with in an earlier grade, so that a practical knowledge of the skills and subjects taught, once acquired will not be lost."[36]

Distinctive features

Some distinctive features of the curriculum emerge:

(1) The various "subjects" are inter-related and their mutually reinforcing capabilities are fully exploited. For example, singing accompanied craft-work and physical drill. Under health, the various normal life activities—such as sweeping, digging, drawing water etc.,—are utilised for physical training and building of the body and for giving various correlated lessons under health.
(2) The curriculum is everywhere linked with needs of real life. For example, Item 6 of the art curriculum in Grade V reads as: "Design and decoration for festivals or school celebrations."[37]
(3) Arithmetic is used for buying materials for the school, budgeting for the kitchen etc.
(4) Maximum reliance, in working out the curriculum, on local resources of materials and talent. This becomes easier as there is maximum emphasis on linkage of the curriculum with the local environment. Closely allied is the emphasis on self help in making one's own equipment, repair of tools and equipment etc.
(5) Team work and co-operation are everywhere encouraged. It is the rule rather than the exception, as it is in ordinary schools.

VII

TRAINING OF TEACHERS

The teacher is at the heart of the educational process in any system. It is doubly so in basic education where he has to digest all knowledge and impart it to the student to solve the problems that he faces in living. He has not only to pass on information but has to build attitudes. He has to hold out ideals and try his best to live them. He has himself to be a man of character so that he can build the character of his students. He has above all to love his pupils, which means dedicating himself to their service day and night. He imparts education outside the classroom even more than he does inside it. He has to be intellectually brilliant and morally resplendent.

"A teacher of Nai Taleem," said Gandhiji, "must have all the qualities of the wise man described in the second chapter of the Gita."[38] With an unshakeable "faith in truth and non-violence" he would be able to draw the hardest heart towards him as a magnet."[39] He would have "not only love but reverence, for the children." The teachers must regard their work as "a great trust which they must discharge courageously, intelligently and honestly."[40] They should have an instinctive understanding of every child under their care and also understand their parents.[41]

How are we to get teachers of this calibre in the large numbers required? While every one thought of increasing the salary of teachers as the sovereign remedy—and very often the only remedy they could think of—Gandhiji with his uncanny sense of realism, suggested the following strategy to meet the challenge of linking his goal to the present reality:

(1) While admitting the necessity of raising the salaries of teachers to give them a living wage, Gandhiji was of the view that it could not be out of keeping with the standard of the people he was to serve. Secondly, his salary would be augmented by the labour of his family. Being a craftsman-cum-educationist, the teacher of Nai Taleem would be a "workman worthy of his hire. His wife and children too will be workers. Only thus can

Nai Taleem spread in every village in India."[42] Thirdly, to keep their living expenses down, teachers recruited should belong to the locality. This will have the additional advantage that they would know their pupils and their parents better. Fourthly, he recommended conscription of educated young men and women for a number of years for teaching in schools on a salary not exceeding their maintenance on a scale in keeping with the economic level of the country and he commended the scheme of Prof. K. T. Shah in this regard, where these people were to give one or two years to a cause, which ranked "amongst the noblest of all causes."[43] He said; "Prof. Shah's scheme does contemplate possession of patriotism, spirit of sacrifice, a certain amount of culture, and a training in a handicraft, before they are taken up. His idea is substantial and quite feasible, and deserves the greatest consideration. If we are to wait till we have born teachers, we shall have to wait till Judgement Day for them. I submit that teachers will have to be trained on a wholesale scale during the shortest term possible. This cannot be done unless the services of the existing young men and women are gently impressed."[44] This might appear like moonshine to those who did not know Gandhiji. But he who could inspire young men and women to give up their studies and their careers and court imprisonment could well be expected to bring fourth millions of young men and women to serve this noblest of causes in their own villages on a subsistence wage. Fifthly, while he was for thorough training of the teachers through an intensive course of three years, he was prepared to countenance a shortened course of one year, organised on a highly intensive basis and supplemented by training on the job, helped by periodic refresher courses or through correspondence courses.

The teacher being the pivot of the whole system and the qualities of basic teachers being different from those of ordinary schools requiring "special social and moral attitudes and qualities," the Zakir Hussain Committee felt that "a reliable technique of selection"[45] had to be evolved. While no such tests have been evolved or administered, experience has shown that it should be possible to devise simplified psychological tests to be administered to the large number of elementary teachers who have to be recruited.

Some selection criteria by the Zakir Hussain Committee, however, were laid down. The selected teachers should be of the social type.[46] Secondly, women, preferably mothers, should be recruited as teachers. As Gandhiji said, "the education of little boys and girls could be more effectively handled by women than by men, and by mothers rather than by maidens."[47] Thirdly, as far as possible, as already stated, the teacher should be selected from the locality in which the school is located. Fourthly, academically they would have read up to the Matriculation or passed the Vernacular Final (7th or 8th class) or an equivalent examination and in addition, should have had two years' teaching experience. In regard to the former experience has shown that it is better to rule out the Matriculate. For his knowledge of English is irrelevant. His subject knowledge is generally no more than that of the Vernacular Final. The market of the latter being limited one will have a large number of candidates available from which to choose the right type of teachers and also one can be more sure of their sticking to the job. The latter recommendation is also controversial. For he who has taught for two years by the ordinary method will find it very difficult to change to the Basic methodology. A fresher properly trained in the basic method will find it much easier.

As regards the content of training, the most important component is the giving to the pupil-teachers "an understanding of the new educational and social ideology inspiring the scheme, combined with enthusiasm for working it out."[48] This would necessitate the location of training institutions in rural areas even for teachers intended for urban areas to give them a feel of the rural community which constitutes the vast majority of the country and thereby engender in them a common national outlook. The training schools should he, as far as possible, residential, where the students and the teachers would co-operate in building up a vigorous, all-round community life in the school in intimate touch and interacting with the environing community. The real success of the training institutions will be judged, said the Committee, "by the variety and spontaneity of the various hobbies and social activities, the enthusiasm and persistence with which they are carried out, and their reaction on the life of schools and the community."[49] As regards the professional subjects, the knowledge already existing with the pupils, was to be given "professional orientation" and their further study was to be left to the teacher's individual effort subsequently. This "orientation" consisted in recalling the knowledge gained to solve the problems arising in the school community life or in that of the local community. Gandhiji said: "What we need is educationists with originality, fired with true zeal, who will think out from day to day what they are going to teach their pupils. The teacher cannot get this knowledge through musty volumes. He has to use his own faculties of observation and thinking and impart this knowledge to the children through his life, with the help of a craft. This means a revolution in the method of teaching, a revolution in the teachers' outlook."[50] Gandhiji, therefore, felt that in training institutions the pupil-teachers must re-learn their knowledge of subjects in relation to the problems of the craft and thus teacher training should stimulate the teaching in schools. Demonstration schools organised for practice-teaching would also serve as models for the local schools. In regard to craft teaching, the view was that the pupil-teachers should be trained in skill in some basic crafts as the requirement of Basic Schools was a craftsman-cum-educationist and it was much easier to teach a craft to a generally educated person than to give general education of the required standard to a craftsman. So the First Basic Education Conference resolved: "In order to exploit the full educational possibilities of the scheme, it is necessary to train our general teachers as craftsmen also; the purpose in view will not be achieved if craftsmen are associated with teachers in the work of the Basic Schools."[51]

VIII

TEXT-BOOKS

Gandhiji regarded text-books as unnecessary for children at least in the earlier stages. The emphasis should be on oral training. For "Children take in much more and with less labour through their ears than through their eyes".[52] Therefore, "To impose on children of tender age a knowledge of the alphabet and the ability to read before they can gain general knowledge is to deprive them, whilst they are fresh, of the power of assimilating instruction by word of mouth".[53] He said in his Autobiography: "I have always felt that the true text-book for the pupil is his teacher".[54] The teacher "will have to prepare the daily lesson from the material available to him. This, too, he will have to suit to special requirements of his class".[55] This he said in 1933 and was anticipating what was to become absolutely clear when Basic Education was launched in 1937. The poverty of the village children who could not afford text-books made emphasis on them unfair as it meant "deprivation of the vast majority of village children of the means of instruction".[56] Even to the extent that text-books were necessary, they had to be rewritten, closely related to the Indian environment, prevailing in the homes of children, and by patriotic Indians. He vigorously and relentlessly attacked the existing text-books in our schools. He said: " . . . there seems to be no doubt that in the public schools, the books used, especially for children, are for the most part useless when they are not harmful . . . they are not written for Indian boys and girls, nor for the Indian environment. When they are so written, they are generally undigested imitations hardly answering the wants of the scholar".[57] Again: "Almost from the commencement the text-books deal, not with the things which the boys and girls have always to deal with in their homes, but things to which they are perfect strangers. It is not through the text-books that a lad learns what is right and what is wrong in the home life. He is never taught to have any pride in his surroundings. The higher he goes the farther he is removed from his home, so that at the end of his education he becomes estranged from his surroundings. He feels no poetry about the home life. The village scenes are all a sealed book to him. His own civilisation is presented to him as imbecile, barbarous, superstitious and useless for all practical purposes".[58] Therefore, if he had his way, he would destory most of the present text-books and get text-books written by Indians, "which have a bearing on and correspondence with the home life, so that a boy, as he learns, may react upon his immediate surrounding".[59] Similarly the books should be written with Indian perception. For example, "A Frenchman writing a history of India will write it in his own way. The Englishman will write it quite differently. . . . Indian history written from original sources by an Indian patriot will be different from that written by an English bureaucrat, though each may be quite honest. We have grievously erred in accepting English estimates of our events in our national life".[60]

There is, however, no denying the importance of text-books, and even more so of guide-books for teachers, in basic education. Though the importance of the former is much less than in the ordinary system, that of the latter is much greater. Experience showed that the ordinary teacher had neither the comprehensive knowledge of all subjects required for full utilisation in solving problems of daily life nor had it been sufficiently digested to be mobile enough to immediately and spontaneously get related to the common phenomena, problems and processes of daily life. The habit of observation of these phenomena, problems and processes had also not been developed to a sufficient degree of keenness to open up the vast field for possible correlation. To effect this we need problem etc., based text-books like "the science of the kitchen", "Safai (sanitation), "The Mechanics of the Spinning Wheel" etc., where problems are identified, analysed in detail, and their solutions explained, again in detail, in terms of the knowledge of various disciplines. The task of writing of text-books, guide-books etc., is two fold:

(a) a number of people whose curiosity about daily life had been sufficiently excited to enable them to unravel the sophistication underlying the apparent simplicity, which we accept without thinking, of its events; and

(b) to have experts of various subjects, working in close co-operation with the former to answer their questions.

A huge, well-directed national effort is required for the purpose. Stimulated and guided by such guide-books, even an ordinary teacher can teach by the Basic method with ease.

IX

EVALUATION

The Indian University Education Commission (1946-49) regarded examination reform as the single most important reform required in our education system. Expert opinion today regards examinations as unreliable and only partial test of the accomplishment of a student or an institution and emphasise the necessity of at least supplementing, if not replacing, of the written and external examination by internal assessment. What is true in the case of the prevailing, largely intellectual system of education becomes doubly relevant in the Basic System, where the objectives are quite different—the testing of habits and attitudes, manual skills, problem solving capability etc., apart from subject knowledge. Only somebody who has watched the student in action, day after day, over a period of time, can be in a position to judge. Therefore, internal assessment alone is relevant and the diaries of students and teachers are an invaluable guide to the evaluator. No wonder Gandhiji considered written examinations as a curse and the Zakir Husain Committee felt that a bad education system had been made worse by attaching to examinations value completely unrelated to their utility.[61] Failing pupils and making them repeat the course was to be avoided as far as possible. For "If a large number of children in a class 'fail', the work of the teacher needs watching. If a school records many failures, its administration must be looked into, and if the number of failures in the whole system is large, there is something wrong with the curriculum and the norms set for the several grades".[62]

The Committee, however, realised the necessity of some sort of evaluation and recommended an administrative check of the work of the schools in a prescribed area by means of a sample measurement of the attainments of selected groups of students conducted by the inspectors of the Education Board. But in order to get a correct idea of the performance of a school it is necessary for the inspectors to live in a school for three or four days and watch the life of the school and its interaction with the local community.

X

SUPERVISION AND CONTROL

The modern concept of supervision as friendly guidance is doubly important in Basic Education. Being life-based and local environment based, education in a basic school is a dynamic process, which the teacher understands in many respects better than an outside supervisor. There is still room for a senior and more experienced person with a wider outlook. But even he must understand the local problems in co-operation with the teacher before he can guide from his wider experience and broader outlook. It has, therefore, to be a process of co-operative learning rather than dictation by an all-knowing superior. This becomes even more important at the experimental stage when new problems arise and new solutions tried. That the whole educational policy and programme was to be revised and improved upon through research and experience was underlined by the Zakir Hussain Committee.

The supervisors in order to discharge their very delicate responsibility had to be very carefully selected and well-trained so that their advice could be accepted for its inherent worth rather than because it came from a superior officer. That way alone supervision could become, as the Committee wanted it to become, "personal co-operation and help offered by one who knows more to a less experienced or less resourceful colleague". The Committee, therefore, laid down the minimum qualifications for a supervisor as: training as a basic teacher, two years' experience of successful teaching and one year of training as a supervisor. The lack of properly qualified and sympathetic supervisors ultimately ruined the scheme.

At the policy level, the Committee recommended an All-India Board of Education and Provincial Boards of Education to guide and implement the programme of Basic Education. The Hindustani Talimi Sangh, formed in 1939, assumed the role of the All-India Board to act as a clearing house of information in regard to relevant experiments in India and abroad; to research scientifically the various problems identified by itself or referred to it; and to advise the various Provincial Boards in regard to problems of the training of teachers and supervisors and other specific problems referred to it.[63]

The duties of the Provincial Boards were to adapt the curriculum suggested by the Committee on an All-India basis to local conditions, do research in methodology, guide teachers in evaluation, and inform them of successful experiments in India and abroad.[64]

In addition, there was to be a Central Institute of Indian Education with the following functions:

> "(1) To serve as an advisory body on matters of educational policy and practice.
> (2) To study and discuss the ideas and aims underlying educational efforts in India and outside, and to make the results of this study available to all who are interested.
> (3) To collect information about and to keep in touch with the educational work of the various states in India as well as foreign countries.
> (4) To organise research on problems relating to education.
> (5) To issue monographs and a magazine for educational workers".[65]

The National Institute of Basic Education, set up in 1956 under the Ministry of Education, was entrusted with this work.

Another important feature of the organisation proposed for the implementation of the Wardha Scheme was the cooperative links which were to be established with other Departments like Health, Agriculture etc., in keeping with the enlarged and comprehensive concept of education under the new scheme.[66] The Committee anticipated UNESCO's concept of developing close by nearly half a century inter-sectoral linkages in using education for social and economic development.

This well-rounded and well-balanced organisational pattern for guidance and control was, however, disturbed by the Central Advisory Board of Education, on which all the Provincial Ministers were represented. So there emerged two centres of direction: the Hindustani Talimi Sangh, set up by the Congress in 1939, and the Central Advisory Board of Education which had been revived by the Central Government in 1935. Differences soon arose between the two bodies. For example, Gandhiji regarded self-support as the acid test of the reality of Basic Education. Even the cautious Zakir Hussain Committee had no doubt that the school products could "cover the major portion of its running expenses"[67] if the State would take over the manufacture of these schools. The Second Kher Committee of the CABE, however, felt that even the current expenditure must be contributed by Government as it had not been possible to meet it from the produce of children. One can understand the Committee taking due note of the negative experience. But the Committee did not take adequate note of the positive experience, say, of Bihar and Sewagram, in this regard and lay its main emphasis on improving productivity and suggesting means for doing so instead of pronouncing its judgement on the basis of such insufficient experience, gained under extremely unfavourable circumstances in the case of such a vital part of such a radical scheme of reform. The result was serious slippage in the effort to make the scheme self-supporting and people began to regard self-support as an unessential part of the scheme. In regard to the concept of a unified school of 8 years also the CABE Committee (second Kher Committee Report) recommended a break at 11, so that those who wanted to go into other types of schools could go there, study through English and prepare for the university. Even when Government decided upon Basic Education as the pattern of education for children from 6-14, their education was to be given in two separate institutions: Junior Basic Schools for children of 6-11 and Senior Basic Schools for children of 11-14. The distortions that this would introduce have already been discussed. Similarly whereas Gandhiji and the Hindustani Talimi Sangh advocated a single craft, the Kher Committee was of the view that "in the lower classes there should be no single basic craft but that the various forms of activity should serve as a preparation for, and develop into, a productive basic craft in the higher classes".[68] The reason was as follows: "To prescribe one basic craft in the lowest class of a school which children of the age of about 6 may join in educationally unwise. The activities in these classes arise from the child's interests and desires and should not be forced on him by the adult. Any activity which appeals to a child's interest is suitable as long as it makes a demand on a boy's skill, judgement, sense of observation and power of calculation and combines all or some of these in a constructive effort to achieve an end which he himself desires to achieve. As the Wood-Abbott Report says, 'it is not so much the thing made or done as the integration required in the making or doing, which is of educational value'. Dr. Zakir Hussain himself emphasises this point in his appendix to the Activity School when he says, 'it is not the attainment of skill but the process of acquiring it that is educative'. As the child becomes older his interests change. Many of them become less transitory and can be satisfied through one basic craft in which the pupils should reach a high degree of skill. Such crafts as agriculture, weaving, wood-work, metal work provide facilities for educational development, appeal to the growing child's sense of making and doing something, increase his self-respect since the produce of his labour has a marketable value and tend to remove the false idea that manual work is objectionable".[69] How this did not fit in with the educational and financial objectives of basic education has already been discussed. Similarly, in regard to English the views of the Hindustani Talimi Sangh and the Central Advisory Board were completely at variance. While the former specifically ruled out English in the Basic curriculum, the second Wardha Education Committee of the CABE recommended (1940) its teaching on a voluntary basis as necessary at the Senior Basic School level to enable the more intelligent of the pupils to join the other more intelligent group who would have already gone to other schools after the Junior Basic stage as a prelude to pursuing higher studies. So the Basic Schools of the conception of the Hindustani Talimi Sangh were considered by the Committee as catering to the less intelligent pupils, who would not go in for higher education. The views of the CABE were so different from those of Gandhiji and the Hindustani Talimi Sangh that if implemented their way Basic Education would be completely distorted. No wonder Vinoba feared that in the hands of Government Basic Education "may be so changed that it may be difficult to recognise it, and it may not fulfil the high hopes we have from it. One is reminded of proverb: 'I tried to fashion the God Ganapati, but it turned out to be a monkey'. No one is to blame when this happens, because the government department is an old piece of machinery, and when new wine is poured into old bottles, the result is inevitable. Therefore, we should be alert and prepared to meet the danger".[70] Gandhiji shared his disappointment over this divided command with the members of the Hindustani Talimi Sangh at Patna in 1947.[71] In reply to Dr. Zakir Hussain's suggestion that Gandhiji should help coordinate the activities of the Government and the Sangh, Gandhiji confessed that he no longer commanded the same influence as he used to do. In his characteristic way trying to see the other persons point of view he added: "I do not blame the Government for apathy. They have inherited a machinery which they have to work. If I had been a minister, perhaps I too would have acted similarly. Still, I am talking things over with Pandit Jawahar Lal and others. One task of the educationists is to explain things. Is it not?" Dr. Zakir Hussain put in: "I believe that the fault lay in the fact that the Congress had never explained its educational policy to its ministers. I met Maulana Abul Kalam Azad before coming here. He had expressed sympathy and said that he would like to meet the Sangh. The Sangh has now decided to see him". Gandhiji replied: "The Government should have invited you at the very outset. Mr. Sargeant should work under the guidance of the Sangh. I had suggested to the Government that they should send you an invitation". The Government never did that. The gulf between the two bodies—the HTS and the CABE—became wider and wider after Gandhiji's death. When in 1949 the author joined the Ministry of Education he was told by one of the most senior officers that the Basic Education which the Government had accepted was different from the orthodox version of it.

Another thing that Gandhiji said on this occasion is significant: "The Congress created the Hindustani Talimi Sangh, but never took any interest in it. Similarly the Charkha Sangh is a progeny of the Congress, but it never made it its own. Who cares for these institutions today? When Congressmen had only a little money and a little experience they paid some attention to constructive work. Today, however, the entire Government has come into our hands. They have not yet digested the power it has brought. They will take time to do so".[72] So even in Gandhiji's time it became clear that the political will was not behind the great experiment. Perhaps they had not bothered to understand it fully and were consequently not committed to it and so the bureaucrat had almost complete freedom to fashion our education policy. Bureaucracy, however, knows only to run an existing system rather than to innovate. With a half-understanding and far from committed political authority and a bureaucracy, by its very nature, set in its ways, a radical reform like Basic Education was foredoomed to failure.

NOTES AND REFERENCES

1. *Young India*, 14 Aug., 1924.
2. *Ibid.*
3. *First Wardha Education Committee of the Central Advisory Board of Education*, op. cit., 1939, p. 5.
4. *Harijan*, 4 March 1939.
5. *Basic National Education*, op. cit., 1939, p. 58.
6. *One Step Forward*, op. cit., p. 217.
7. *Perianayickenpalaygam Report*, op. cit., p. 36.
8. *Educational Reconstruction*, op. cit., p. 119.
9. *Basic National Education*, op. cit., p, 39.
10. "A large part of the 'play' of young children consists in imitation of the adult activities of the community; they are happy and absorbed in an occupation which satisfies at one and the same time their love of manipulation, their social interests, and their urge to creative and productive activity".—*Basic Education: Its Principles and Practice* by Marjorie Sykes, Deptt. of Public Instruction, Government of Madras, 1950, p. 4.
11. *Harijan*, 4 March 1939.
12. *Ibid.*, 9 Nov. 1947.
13. *Ibid.*, 18 Sept. 1937.
14. *Ibid.*, 25 Aug.. 1946.
15. *Young India*, 19 Jan., 1921.
16. *Basic National Education*, op. cit., p. 16.
17. *Speeches and Writings of Mahatma Gandhi*, op. cit., p. 235.
18. Nayyar, Dev Prakash, "With the Educationists", *Harijan*, 9 Nov. 1947.
19. *Young India*, 7 Aug., 1924.
20. *Harijan*, 25 Aug., 1946.
21. The salary Gandhiji suggested for the teacher was Rs. 25, if possible, and not less than Rs. 20 in any case.

22. *Young India*, 1 June 1921.
23. *Basic National Education*, 1939, p. 19.
24. *Ibid.*, pp. 19-20.
25. *Ibid.*, p. 53.
26. *Ibid.*, p. 12.
27. *One Step Forward*, 1939, pp. 183-84.
28. *Basic National Education*, 1939, p. 23.
29. *Ibid.*, p. 186.
30. *Harijan*, 21 Nov., 1936.
31. *Basic National Education*, 1939, p. 25.
32. *Speeches and Writings of Mahatma Gandhi*, op. cit., p. 395.
33. *Basic National Education*, op. cit., (1939), pp. 89-90.
34. *Ibid.*, p. 47.
35. In many schools practical work in this section may have to be confined to vegetable gardening until adequate provision of land can be made.
36. *Basic National Education*, op. cit., 1952, pp. 10-14.
37. *Perianayickenpalayam Report*, op. cit., p. 36.
38. *Ibid.*, p. 36.
39. *Ibid.*
40. *Harijan*, 1 Dec., 1933.
41. *Young India*, 7 Aug., 1924.
42. *Harijan*, 9 Nov., 1947.
43. *Ibid.*, 30 Oct., 1937.
44. *Ibid.*, 16 Oct., 1937.
45. *Basic National Education*, 1939, p. 41.
46. *Ibid.*
47. *Harijan*, 30 Oct. 1937.
48. *Basic National Education*, 1939, p. 28.
49. *Ibid.*, p. 32.
50. *Harijan*, 18 Feb., 1939.
51. *One Step Forward*, op. cit., p. 219. Resolution of the First Basic Education Conference.
52. *Autobiography* II, p. 198.
53. *Young India*, 16 Sept., 1926.
54. *Autobiography* II, p. 198.
55. *Harijan*, 1 Dec., 1933.
56. *Young India*, 16 Sept., 1926.
57. *Harijan* 1 Dec., 1933.
58. *Young India*, 1 Sept., 1921.
59. *Ibid.*
60. *Ibid.*, 21 June, 1928.
61. *Basic National Education*, 1939, p. 43.
62. *Ibid.*, p. 37.
63. *Ibid.*, pp. 64-65.
64. *Ibid.*, p. 43-44.

65. *Ibid.*, p. 44.
66. *Ibid.*, p. 45.
67. *Ibid.*, p. 13.
68. *First Kher Committee Report*, op. cit., p. 7.
69. *Ibid.*, p. 7.
70. Inaugural Address at the Fifth All-India Basic Education Conference, 1949, Report, 1950, p. 8.
71. *Harijan*, 9 Nov., 1947.
72. *Ibid.*

NINE

POST-BASIC EDUCATION

I

INTRODUCTION

As a result of the churning of his mind in jail, Gandhiji extended the scope of Nai Taleem in the All-India Basic Education Conference held at Sewagram in January 1945, to cover all stages of life—"from the moment of conception to the moment of death"—and pushed the workers of Nai Taleem from "a sheltered bay to the open ocean". As a result, various committees were set up to work out plans for the different stages of education. The one on Post-basic had assumed special urgency in view of the fact that students in the Basic school at Sewagram and those in Bihar would soon thereafter be completing their seven years and the workers would be faced with the problem of providing them further education on basic lines if they so desired. So the Conference recommended that the Hindustani Talimi Sangh should urgently consider the question of providing post-basic education both on a part-time and full-time basis. A Special Committee was set up. A Memorandum was drawn up to form the basis of the work of the Committee. The Committee met in July 1945 and after their preliminary deliberations met Gandhiji to seek his guidance. They met him on July 31, and August 1. This meeting brings out very clearly

Gandhiji's approach to the development of Post-basic education and to new adventures in general.

II

GANDHIJI'S GUIDELINES

The Memorandum, forming the basis of the Committee's work, had mentioned 14 diversified courses. The Committee decided to set up various sub-committees to work out the syllabi for the courses selected. While the Committee was not averse to starting with only one model, they wanted to draw up a complete blue-print of a comprehensive scheme of Post-basic education. "For", as Saiyidain put it, "a scheme should be such as would be useful, even in the future. It should not be meant for the impoverished India of the present day but also for the free and independent India of tomorrow when not only one but many things would be needed for which the nation would have to be educated".

Gandhiji replied in words that brought out vividly "this naked man at grips with naked realities". Without a deliberate choice of the real and the relevant in preference to the outwardly impressive and the dazzling, he would not have been able to "shake the foundations of India". He reminded them of the political uncertainty, in contrast to the situation that prevailed when they launched basic education. At that time the State was in their hands. "Today their ship was lying in an ocean. They did not know its destination. Therefore, they would have to sound the bottom after going a short distance. Again, they had no experience except that of basic education during the last seven years. His advice, therefore, was that they should appoint someone who would watch the boys who had come out of basic schools and ascertain what they wanted to do. With that data they should draw up a few schemes. Then he would pick up one for them as the most suitable. Considering the small number of boys who would be coming out of basic schools and the still smaller number who would like to continue their education on a whole-time basis, perhaps more than one scheme would not be necessary. "It was not necessary to chalk out an impressive

Post-basic course". That would be only building "castles in the air", as Sargeant had done. "He would run a Post-basic course at one place only. Experience would then indicate the next step". They must also remember that they did not have the resources for doing things on a large scale. They should not "want to give to the country a thing that would endure for ever". They should draw up something which was immediately relevant and needed. If they proceeded in that fashion, the boys would be attracted.

Similarly, in regard to those who would enter life at the end of their basic course. They should follow them in their homes, ascertain their needs and devise courses to meet them on a part-time basis. Only then would they be drawn to these courses. They would be working full time and would be too busy for courses that did not precisely meet their needs. He felt such courses should come under adult education.

He believed in doing things on a small scale and learning from experience. "The Satyagrah he had conducted—he had not forgotten a single line of it. People also had learnt it from him. Whatever he said about it, people would not laugh at it. In that way only work could spread".

Another point on which his views were sought was whether fees could be charged from some students, while the poorer ones would receive education free. He felt education should be free but self-supporting. So far he had been saying that education should be self-supporting as far as possible. His experience and the opportunity for thought he had had in jail had convinced him that "self-support was the acid test". "Without it our boys and girls were bound to remain uneducated. . . . Self-support was the symbol of freedom. When the students and teachers understood that, they would feel the fragrance that rose from it. Their ideal was not the palatial colleges of the cities, which had been built by draining the wealth of the villages. Their education should be cheap. Self-support was their foundation. The whole expense of the school should be recovered. They had to cheapen education in the cities also. Both the students and the teachers alike would work and recover the entire expense from the beginning to the end. The more he thought the more he felt how beautiful a thing it was. And it would become very beautiful indeed if they proved it and others accepted it. It was a matter of crores—all lying prostrate on the ground. What Sargeant and others were saying was like building castles in the air. Such schemes could never materialise. They however, had a sovereign remedy. If they lost that they would be to blame. They should be thinking all the twentyfour hours, least they build on a foundation which might have to be destroyed afterwards. For the present, however, he would leave out the building expenses, and would be content to recover all other expenses".[1]

To the question whether mill processes were to be taught to the boys who opted for the craft of cloth production, Gandhiji replied in the negative except to the extent required for the sake of comparison. Their role was to extend the science of the craft they had already taught. "For their bullock cart the West had its steam engine. He was not blind to the difference, when he preferred the bullock cart. He did so knowingly. Without it he would not be able to shake the foundations of India. Russia taught handicrafts for purposes of ridicule to show the progress they had made. They in India, however, wanted to teach that handicrafts were a superior thing". So far as post-basic education was concerned, "they must work only to extend the foundations they had already laid".

As regards the place of music and painting in post-basic education, they had an assured place and they must permeate and beautify life but Gandhiji was against training professional musicians and painters. Even in regard to teachers of music (and painting), he felt "we should not train mere music teachers by leaving out other things. That would be wrong. It should be a part of life as is eating". The pride of place was still to be given to craft, which attacked the central problem of India's poverty.

III

GENERAL PRINCIPLES AND OBJECTIVES OF POST-BASIC EDUCATION

So the parametres within which post-basic education had to be planned were two. Firstly, as Gandhiji had again and again emphasised, higher education had to be developed on the foundations of basic education. Secondly, it was to be planned keeping in view the special needs of the relevant age-group—both as individuals and citizens of a democracy. Within these parameters the general principles of post-basic education were laid down by the Post-basic Committee of the Hindustani Talimi Sangh, after its January 1945, and February 1946 meetings, as follows:

(1) Post-basic education, like basic education, should be based on the principle of education through craft.
(2) The course should be complete in itself.
(3) The objective of post-basic education should be the same as that of basic education, as regards the all-round development of the student both as an individual and as a useful member of society.
(4) The course of study should be diversified so as to suit pupils of different aptitudes.
(5) The medium of instruction should be the language prevalent in the locality where the institution of post-basic education is situated.
(6) The duration of the course should differ for various courses in accordance with the requirements of each course, but should in general be three to four years.
(7) Education at the post-basic stage should be so organised as to enable the pupils to earn the cost of maintaining themselves during the training period.
(8) Our ultimate objective should be that all boys and girls should complete the course of post-basic education.

These principles were added to by the All-India Basic Education Conference held at Sewagram in March 1951, in the light of the experience gained of working post-basic education for 4 years. The additions were on four problems of major practical importance and were as follows:

(1) *Selection of basic craft*

Any craft selected as the medium of education in a post-basic school should fulfil the following conditions:

(a) It must supply some primary need of man, such as food, clothing, housing, or other daily necessity.
(b) It should be capable of providing full-time employment, i.e., a student specialising in the craft should be able to earn his living by making it his life-occupation.
(c) It should give scope for full all-round development of the personality.

In applying these principles it should be borne in mind that a post-basic school is to be organised as a residential "school-village", and should be a co-operative, self-sufficient, and self-directed community. All the crafts needed for daily living should find a place there, and the teachers and students should work together to supply their own needs.

Having regard to the present condition of the country agriculture and allied crafts should form the centre of post-basic education.

(2) *Self-sufficiency at the post-basic stage*

The following principles should be regarded as the basis of the self-sufficiency programme:

(a) The economy should be based not on money, but on production through skilled labour.
(b) The student should be able to earn his primary needs (food, clothing, oil, soap, etc.) by his productive labour. In calculating self-sufficiency the whole post-basic course should be treated as one unit.
(c) The public or Government should provide the post-basic school with enough land, equipment and capital to ensure productive employment for all its students.
(d) The payment made to the students should be independent of profit or loss in the working of the crafts, and should be related to their labour and working efficiency. It should be made not in cash but in kind, by the supply of primary needs.
(e) The profits earned from crafts organised in the school should be used for the recurring expenses of the school.

The balance if any should be accumulated in an emergency fund and used to meet abnormal difficulties (e.g., a bad crop failure) or spent on the development of the school.

(3) *Hostel*

A post-basic school should be residential, because Nai Talim should be practised by the students in every aspect of life. The school should be a centre of local community life, and it is needful for the full development of the students that they should take part in all social activities. However, where circumstances make it impossible for an individual student to stay in the hostel, provision may be made for him to live at home. It must be arranged that such students have one meal a day in the school, to provide an opportunity for them to share in the social life, and in return for their productive labour.

(4) *Co-education*

Co-education at the post-basic stage is necessary. The students should work and read together and there should be no differentiation between the sexes in courses of study. The hostels for boys and girls should be separate, and where separate additional instruction is found desirable, it should be arranged for in the hostel outside the regular curriculum.

Subsequently, as a result of further thought and discussion in the Higher Education Sub-Committee in July 1951 two points in the statement of principles and objectives, were modified and clarified:

(1) The first related to the inter-dependent twin objectives relating to the individual and society. It was redefined as follows: "That every boy and girl in India should grow up as a citizen of a new social order based on co-operative work, with an understanding of the rights, responsibilities and obligations conferred by membership of such a society; secondly, that each individual

should have the fullest opportunity for the balanced and harmonious development of his personality".

While the individual good and the social good are both important, it is significant that the mention of the social precedes that of the individual. This becomes still clearer when read with the redefinition of point 3 (of 1946 Statement) in 1949, when the social aim is given a definite preference over the individual. For "the philosophy underlying Nai Taleem accepts individual good not as an end in itself but as an integeral part of the common good".

(2) The second related to self-sufficiency and was reworded as follows:

> "Education at the post-basic stage should be so organised that the productive work of the school can meet the cost of maintenance of pupils, teachers, and teachers' families.

Note: This condition can be met if all primary needs of the teacher-student community are supplied in kind by the co-operative labour of the whole teacher-student body. Money for secondary needs should be obtained by the sale of agricultural and other produce which is produced by the community in excess of its own primary needs.

The co-operation of the parents of the students and the public of the neighbourhood should be sought wherever circumstances permit in meeting the necessary capital expenditure of the post-basic stage".

IV

STANDARDS OF ACHIEVEMENT

The Post-Basic Committee had also been asked to lay down standards of attainment by the end of the Post-Basic Course. The Committee laid down the following standards:[1]

A. Standard of individual development:

- (i) Knowledge and ability sufficient to make a positive contribution as a responsible, full-earning member towards the support of the family to which he belongs. The standard of living which should be aimed at must be judged in relation to the average standard of the village or region. It must be emphasised that a higher standard of living does not necessarily mean a higher rate of expenditure.
- (ii) Knowledge needed for self-sufficiency with regard to the main requirements of personal and family life, i.e., sufficient knowledge and skill to provide the home and family with food, clothing, shelter and the ordinary accessories of family life.
- (iii) Knowledge of the rules and practice of healthy living.
- (iv) Knowledge necessary for wise parenthood.
- (v) Knowledge and skill necessary for profitable use of leisure.
- (vi) Appreciation and love of beauty.
- (vii) Formation of good manners.
- (viii) Development of a higher standard of personal character

B. Standard of development as a citizen:

- (i) Ability to take responsibility in community affairs.
- (ii) An interest in the achievements and welfare of mankind in general and of India in particular.
- (iii) The attitude needed to win and maintain (a) freedom (political, social and economic) and (b) a co-operative society based on love, truth and justice.
- (iv) An attitude of respect and courtesy towards others especially to those whose religious beliefs, social customs, or cultural traditions (linguistic, provincial, racial and national) differ from one's own. A readiness to cultivate friendship and neighbourliness with members of other communities.

(v) An equal reverence for the great world religions together with some knowledge of their scriptures and of the lives and teachings of their great prophets.

C. General knowledge:

(i) Scientific knowledge and skill in the work chosen as the centre of educational programme to enable the pupil to use it as his vocation.
(ii) Mastery in the language and literature of the area sufficient for a good understanding of the technical literature connected with the work which forms the centre of his educational programme and ability to speak and write on the subject clearly.
(iii) Ability to speak the national language with ability to read and write in both the scripts.
(iv) A knowledge of the elements of health education, i.e., physiology, hygiene, sanitation, and dietetics and simple preventive measures and remedies for ordinary ailments.
(v) An understanding of the political, economic, cultural and social problems of India in particular and of the world in general.
(vi) Knowledge and appreciation of the contribution of science to modern life.

Note: The committee of July, 1951 approved of the retention of the clause which requires a study of both the Nagari and Persian scripts of Hindustani.

V

ASSESSMENT

The March 1951 All India Basic Education Conference recommended that the Hindustani Talimi Sangh should appoint a fresh Committee to define courses and standards of achievement on the basis of experience gained. The Committee met twice—in March and July 1951. It was also asked to recommend redefinition of some of the general principles enunciated by the 1945-46 Committee, already mentioned. It also laid down principles of assessment of work—both pertaining to practical efficiency and intellectual attainments, standardisation of the records needed to make such assessment possible and the assessment of work and the form and title of the certificate to be awarded on the completion of the Post-Basic Course. The principles of assessment laid down were as follows:

1. The assessment of the following people should be taken into account:

   (a) the pupil himself;
   (b) the family of the pupil;
   (c) fellow members of the post-basic community;
   (d) the teachers;
   (e) the workers of some outside institution or agency in which the pupil should spend about 3 months as part of his course.

   Special questionnaires will have to be designed for eliciting the opinions (b) and (c); these should be prepared by a sub-committee to be appointed for the purpose.
   The final deciding authority on assessment should be the staff council of the institution.

2. The teachers' assessment should take into account records of work and of all-round individual progress maintained under the following heads:

   (a) Pupils' records:

      1. Monthly diaries of pupils.
      2. Record of craft work. Record of duties carried out; personal observations and critical assessment of the work done.
      3. Notes on correlated lessons: Periodic written statements of the new work done.

(b) Teacher's records:

1. Teachers' record of progress. Ability to plan, execute and assess units of work. Spirit of learning. Eagerness to learn new things. An open and alert mind.
2. Teachers' observation of development of character. Attitude towards community life. Spirit of co-operation. Capacity to take responsibility. Spirit of service. Spirit of unselfishness. Readiness to own mistakes. Moral courage and resourcefulness in emergency.
3. Care of personal belongings. Care of community and national wealth. Simplicity of life.

Note: (i) The units of work mentioned under (b) 1 above should include programmes for family, institution and neighbourhood in sanitation, preventive health measures and recreation.

(ii) An assessment of each pupil's powers of initiative, perseverance, and intelligent planning with regard to the independent pursuit of knowledge is of very great importance in advising students on their future, whether or not they are contemplating any form of specialised or professional training.

VI

THE SEWAGRAM EXPERIMENT

Gandhiji said: "We can only fulfil the objectives of Nai Taleem when we organise higher education on the basis of life in a co-operative, self-sufficient community—that is to say, in a community, which shall strive to meet its own needs in food and clothing on a co-operative basis. Not less than one hundred pupils and teachers should be working together in such a community, for only then can training in all aspects of Nai Taleem be given and the needs of society met". He also drew attention to the changing needs of society and the duty of Nai Taleem to adjust its priorities to meet them efficiently. "If Nai Taleem", he said, "is to be genuine it must answer to the changing needs of the country". As at that time the need for food was most urgent, he advised: "Today the country is hungry, therefore, it is the duty of Nai Taleem to find an answer to the problem of food. Here is the land lying; grow as much as you can. Give the greatest possible time to this work. We must realise that every single student must grow food. He must grow sufficient for his own needs and so far as possible must supply the needs of others also".

The Sewagram Post-Basic School was a fully residential institution. Democratically organised, on the basis of co-operative work, and intimately connected with the life of the environing community, community life in the school was at the heart of the educational process. Work consisted of activities calculated to make the community self-reliant in regard to its basic needs as well as making life pleasant, beautiful and creative—both for the individual and society. These activities were community prayer, cleaning, craft work, kitchen work, house building, making and repair of tools, cultural programmes of dance, drama and music, etc. They were conducted in a manner so as to inculcate the individual and social habits and attitudes required for a clean and healthy life. The school community was connected with the local community through ties of service. Every student had to serve the local community in a practical way individually at least for three months. Every activity was educationally and scientifically handled so as to optimise its educational value in terms of inculcation of habits and attitudes and gain all related knowledge of the traditional subjects in a creative way by understanding 'the why and wherefore' of every process involved. Language and literature were not neglected. The regional language skill was developed to enable the students to acquire general and technical knowledge through books and for the appreciation of its literature as well as to express themselves clearly through speech and writing. They were also enabled to gain a working knowledge of the national and an international language. They also studied some of the world's classical literature including great religious scriptures.

The crafts selected were: agriculture, gardening and subsidiary activities such as oil pressing, beekeeping, poultry, gur-making, animal husbandry and dairy-farming, making of clothes (weaving, dyeing, tailoring), making of tools and household equipment, carpentry and smithy, and home science and food-technology.

A few points in regard to the craft activities are worth noting:

1. All crafts are related to meeting the basic needs of life.
2. The approach is experimental with a constant endeavour to improve performance and output.
3. Every student participates in all crafts and all activities as a part of the self-reliance programme. He also has a major craft in which he has to attain higher skills to be able to earn his livelihood through it.
4. In every activity all processes are performed by each student scientifically.

As regards the self-sufficiency attained the details are given in Appendix I. The Uttar Buniyadi Bhavan was self-sufficient to the extent of 71 per cent in 1948-49 (45 students), 58 per cent in 1949-50 (57 students), 70 per cent in 1950-51 (53 students), 90 per cent in 1951-52, and 63.5 per cent in 1952-53 (64 students). The variations are not explained in the records. Nor is it clear whether the teachers' and non-teaching staff's contribution and expenditure were included or not—presumably not. Gandhiji had contemplated that all basic needs of all members of the Nai Taleem Community would be met by the effort of all of them. Again, the self-sufficiency figures above quoted do not include cloth, for which a separate self-sufficiency programme was run. The self-sufficiency further is counted not in terms of basic needs as was the objective but in terms of money. It is doubtful whether the experiment was tried in all its fulness. But even as it is the results in the very first five years of a revolutionary experiment are revealing and show the great potentiality of the Nai Taleem approach. An above average student in 1952-53 in Class XI was self-sufficient to the extent of 80 per cent. In addition, he had woven 12 yards of cloth for his personal use under the cloth self-sufficiency programme. A below average student, however, could be self-sufficient only to the extent of 29 per cent in addition to weaving for himself 8 yards of cloth under the self-sufficiency programme. A regular student over the period 1949-53 attained an over-all self-sufficiency of 60 per cent in addition to weaving 36 yards of cloth under the cloth self-sufficiency programme. The average time spent for the over-all self-sufficiency programme was 102 hours per month or 3 hours and 24 minutes per day or roughly 4 hours per day, excluding Sundays. Vinoba Bhave's dictum that post-basic education was education through self-sufficiency, while basic education was for self-sufficiency was well on the way to being borne out.

The intellectual content and subject knowledge gained was equally impressive. In Appendix II are given "A specimen of correlated teaching" and also the traditional subjects covered in General Science. They are given by Marjorie Sykes,[3] on the basis of the school records. Compared to the average higher secondary school, the results achieved—in the breadth, depth and sophistication of knowledge—in the very first phase, bear reasonable hope that the standard that could be attained was that of the higher secondary stage. It may not and need not be identical. Its base would be wider and it would be more closely related to reality.

As regards the organisation of studies, the basis was more of self-directed study under the teacher's guidance. Since apart from his major craft, a student had to participate in all activities, the students were divided into batches, each one being rotated from department to department. As the problems arising from work were faced by the individual, their solutions were also to be individually sought. Hence the scope for class-room teaching was considerably reduced. Aryanayakam, while reporting to the conference at Perianayickenpalayam in 1949 on the post-basic work at Sewagram said: "There is no regular class system. The tool subjects are in the hands of the children themselves and unless the demand for a regular class comes from them, it is needless imposition."[4]

VII

THE UNIVERSITY EDUCATION COMMISSION'S MODEL

Drawing upon the Gandhian ideals and experiments, the University Education Commission in its Report (1949) presented a model, which is worth very careful study. It was based on Dr. Arthur E. Morgan's Memorandum on "Higher Education in Relation to Rural India." Coming as it did from an eminent engineer from one of the most highly industrialised countries, the USA, his support of the Gandhian principles had a significance of its own. Equally significant were the new dimensions he added to the Gandhian model, especially when post-basic education was yet in a stage of preliminary experimentation. The aim of the Rural Secondary School, as conceived by the Commission, was to demonstrate what was feasible in reconstructing our villages "with the reasonable financial and social resources available." The school would be residential and its layout would be that of what a village should be. The school village would be constructed out of local materials with the labour of teachers and students under the guidance of a technical expert. The design would be a model of cheapness and efficiency and would be evolved by the rural university, to be discussed later. The life style in the school would be as simple and inexpensive as the life in the villages and would be based on self-help by the student and the teaching community. The aim would be to demonstrate how such a life could be clean, healthy, interesting and culturally rich. The various operations on the campus would be performed by the students themselves. Some works such as cleaning the campus, producing crops, cooking etc., would be common to all students. Every boy and girl on the campus should be able to perform almost all common, necessary duties and the dignity of very duty well performed should be fixed in their minds. In addition, each student would take up specialised work suited to his particular bent of mind. The school would have an efficient industrial unit in which, apart from the students being trained, the village mechanics, craftsmen and technicians of all sorts would be given more efficient techniques relevant to rural areas. The aim of the workshop would be to train the villagers for "well balanced, progressive decentralisation" of industry. The school was also to be the seat of all other development departments so that the various departments would be mentally conditioned for integrated co-operative work and the school would be a centre of extension for the community. The aim of the campus or school village would be to help the student to most effective living possible which could act as a demonstration and an inspiration to his fellow beings, to whom he should be educated to be committed. For the aim of education should be to create a leadership steadfastly loyal to the people, who would stay in their midst rather than escape from them. It will be seen that the two dimensions that the Commission added were the introduction of modern industry and the location of the rural development departments on the School Campus. "The secondary school village," says Morgan in his Memorandum, "should be as nearly as possible self-supporting except for providing the lands and buildings. Well planned and well-managed school industries will go far to secure self-support . . . a two to four year period of work in a secondary school industry, under skilled teaching along with related study, should produce highly skilled workers, ready to perform any of the exacting processes in new industries in new secondary school villages." And he is of the view that "it is possible for the basic education programme, especially after the first six or eight years, so to direct its work that industrialisation and well-proportioned all-round education shall aid each other, shall meet a large part of the cost of education, and shall help in modernising India by a pattern that will preserve the best qualities of the new world."

VIII

POST-BASIC EDUCATION: AN EVALUATION

In conclusion one would like to evaluate the Post-Basic Education experiment from three angles. To what extent did it meet the imperatives of adolescence? How far and how effectively did it meet the social challenge? and finally, how far did it meet the organisational challenge?

Child development, as any healthy development, has both continuity and change; and so do its challenges to and requirements from education. The social milieu moreover remains the same and citizenship training has also to be continuously imparted throughout the educational period. The attitudes and competencies required for an integrated and well-balanced personality and a good and effective citizen of a democratic and developing society may be summed up as self-help and self-reliance, co-operative action, tolerance, sense of equality of all citizens, love of freedom, consciousness of rights balanced by a consciousness of duties, national integration and patriotism, vocational competence and a scientific and rational outlook. It is our experience at the basic stage that these attitudes and competencies can best be developed by a life-centred, activity-centred and problem solving education through community living based on co-operative productive work, scientifically performed —knowing 'the why and wherefore' of everything done. This therefore, rightly continues at the Post-Basic stage.

The special changes that take place at the adolescent stage to which the post-basic education caters and the increased social responsibilities that devolve on the pupil in the Indian context and their imperatives are as follows:

(1) The tendency to chaos in the child's behaviour as the desire for "autonomy and personal independence"[5] become predominant. A self-directed community life which is at the heart of post-basic education, for which a certain measure of disciplined behaviour is the *sine qua non*, and which completely environs the individual pupil, keeps the tendency to chaos in check. At the same time by giving him various responsibilities, voluntarily and willingly accepted, where he has chances of showing himself and feeling his own importance, the educational process through community living provides a healthy outlet for his ego. Habit of disciplined behaviour developed at the basic stage also makes, things somewhat easier.

(2) The stage is marked by very rapid intellectual development making careful guidance necessary, and individual aptitudes emerge more clearly, making fruitful guidance

possible. Life in a post-basic school being a full-fledged life full of many varied activities, provides perhaps better data for educational and vocational guidance than tests usually devised for such purpose.

(3) Talent is more easily identifiable at this stage and as it is a precious resource every society has the responsibility for and the self-interest in nurturing it. Life in a post-basic school with varied activities, throwing challenges at every step and encouraging insatiable curiosity and untiring search for solutions provides an ideal ground for the nurture and development of talent in the direction of its own genius. The method of self and guided study adopted in these institutions allows each pupil to advance at his own pace. And yet the talented by continuous emphasis on social commitment do not develop the complex of belonging to a different breed, which education of the gifted in separate institutions encourages.

(4) One of the major problems of the age-group is the onset of adolescence and the stresses and strains it involves. A post-basic school meets this challenge in a setting of normal life, where boys and girls are not artificially separated, which arouses unhealthy curiosity, and work and study together under the eye of experienced and understanding elders; where sex education receives due emphasis—the ground having been prepared at the basic stage where sex education can be provided in a natural way as a part of biology without exciting unhealthy curiosity; and where solutions to problems are arive at in real life situations, instead of in the abstract in terms of dos and donts.

(5) As the problems of social and personal adjustments are very taxing at this age, and the danger of the child developing life-long complexes is great, student counselling becomes very important. In a post-basic school it is much easier, as his adjustments and maladjustments are laid bare, through the full-blooded life in which he participates, before understanding, well-trained teachers, who can help him concretely and in detail to adjust and watch how he does so.

(6) Very important in Indian conditions is that the pupil should be prepared for employment at this stage. A craft-centred education that post-basic education provides is ideally suited for training him for self-employment, which is the most important and effective strategy in the context of prevailing large-scale unemployment. The crafts are many and varied and provide him with an opportunity to select what suits his individual aptitude best.

(7) This period can be used effectively for leadership training as students are capable of idealistic urges and prepared to undergo considerable personal risks to realise their goal, in addition to having a great desire for recognition. Leadership is a social necessity of democracy. For a large number of leaders are required at various levels to make possible the decentralisation of decision-making, necessary to prevent concentration and centralisation of power. As Eric Jones has pointed out, "high level of leadership is required for a satisfactory devolution of power and that nothing leads more surely to an undue centralisation of authority than a lack of suitable leaders." Since in a democratic setup there has to be a widespread diffusion of authority among the people, leaders at various levels need to be recruited from various sections of the people. This "recruitment" of leaders from various sections can be "attainable only if the educational system is of such a kind that it can recognise and develop the characteristics of leadership: it is only by such an education that the limitations of the social, economic and cultural backgrounds of the individual can be transcended." "Considerable research has been done in the USA to identify leadership traits. There is considerable agreement in their regard. These are: sociability, initiative, persistence, how to get things done, self-confidence, alertness to end insight into situations, co-operativeness, popularity, adaptability and verbal facility." Since "personality traits identified as being related to leadership are acquired traits and as such are subject to modification by training and experience," education

has a significant role to play in the training of people for assuming leadership in various walks of national life. Nai Taleem based on co-operative community living, comprehending a variety of activities, self-directed, is an ideal method of training in assuming and discharging responsibility. The special responsibility of post-basic education in training in multi-level leadership is to train intermediate leaders. As the Secondary Education Commission said, the role of the secondary school was to train students who "should be able to enter various walks of life and fill the role of, what may be called leadership at the intermediate level." "The special function of the secondary school in this context," states the Commission, "is to train persons who will be able to assume the responsibility of leadership—in the social, political, industrial or cultural fields—in their own small groups or communities or localities."

(8) As at this age, the desire for experimentation is very strong and the student's capacity to reason and deduce becomes more pronounced, the emphasis on science is considerably increased. While the technique of correlation and problem-centred teaching still predominates, as the span of sustainable interest is increased the intervals of work and study to understand its problems are increased and building of systematic knowledge of differerent sciences along side problem-centred education becomes possible by a more thorough filling in of gaps in knowledge even by direct teaching where necessary.

(9) The emphasis on social studies is also increased as the child's interest, which is mainly in things and natural phenomena at the primary stage, extends to social relationships as well.

To meet the challenge of social responsibilities which devolve on the students in the Indian context the post-basic school trains them in wise parenthood. This is important as most students in the rural areas enter life at the end of the secondary stage. They are also prepared for employment so that they can take up their responsibility as the bread-winners of their families with confidence.

Leadership training prepares them for playing their due role in a democratic society. The whole life in a post-basic school is so organised and studies centred round it that the students get an all-round knowledge and practice of handling the problems of democratic citizenship. Self-reliance was inculcated at every step and the self-support aspect—which, apart from its other sociological dimensions, had great significance for the spread of mass education which, in turn, had far-reaching implications for a democratic society based on justice, fair play and non-violence receives top priority. The structural organisation of the post-basic course as an integrated course under one roof of four years after eight years of basic education is well suited to teaching the various vocations to a professional standard of skill, to give them the necessary knowledge of science and humanities and to give them citizenship training in requisite habits and attitudes of a durable character. For leadership training also it is best that the post-basic school should be an integrated unit and not a part of it (the last two classes) attached to a college as a tail as is the case with many higher secondary schools. The latter position does not give the top classes the feeling of confidence, which they develop as the top classes of an independent and integrated unit.

By 1951, up to which the present study extends, post-basic education, after its first phase of experimentation had justified the principles on which it was based and achieved an amount of success that indicated its vast potentialities. A major problem that had emerged was how to harmonise the demands of problem-centred correlated teaching and the demands of systematic knowledge of different disciplines. The standard in different subjects that could be reached at the end of the post-basic stage could emerge only after a great deal more of experimentation in this regard. The Memorandum of 1945 had aimed at a standard of the first degree of the university minus English. Even the results achieved with the first batch showed that it was not a wild dream.

Appendix I

WORK DONE

TABLE A: Record of Earnings and Expenses in Uttar Buniyadi Bhavan, Sewagram

	Year								
	1948-49			1949-50			1950-51		
1. Students	46			57			53		
2. Earnings from:	Rs.	as.	ps.	Rs.	as.	ps.	Rs.	as.	ps.
a. Agriculture	3569	15	9	1481	13	9	1500	0	0
b. Animal husbandry	300	0	0	480	0	0	700	0	0
c. Dairy	498	12	0	1070	0	0	700	0	0
d. Oilpress	334	12	0	320	0	0	324	0	0
e. Carpentry and building	395	0	0	788	0	0	324	0	0
f. Weaving	225	15	6	194	1	9	70	0	0
g. Minor crafts*		—			—			—	
h. Social services**	852	14	0	310	0	0	1011	—	0
i. Kitchen and stores	461	12	0	866	0	0	855	0	0
Total	6639	1	3	5509	15	6	5484	0	0
		(71%)†			(58%)			(70%)	
3. Expenses (food and miscellaneous excluding clothes) Total	9411	5	6	9691	14	9	7830	0	0

(Contd.)

TABLE A (*Contd.*)

	Year					
	1951-52			1952-53		
1. Students		73			64	
2. Earnings from:	Rs.	as.	ps.	Rs.	as.	ps.
a. Agriculture	6739	0	0	4410	7	0
b. Animal husbandry	1000	0	0	1181	10	0
c. Dairy	1150	0	0	480	0	0
d. Oilpress	324	0	0	274	14	3
e. Carpentry and building	1170	0	0	640	3	0
f. Weaving	735	0	0	721	8	3
g. Minor crafts*		—		307	5	6
h. Social services**	538	0	0	853	2	0
i. Kitchen and stores	730	0	0	640	12	0
Total	12486	8 (90%)	0	9509	14 (63.5%)	0
3. Expenses food and misc. excluding clothes) Total	13870	8	6	14984	0	0***

Notes: * Minor crafts include tailoring, bakery, palm-gur extraction etc.

** Social services include health work and education.

*** Mess charges at Rs. 15 a month raised to Rs. 16 in 1952-53. Miscellaneous expenses at Rs. 3 a month.

† Figures in brackets indicate the degree of self-support.

Source: Picture and Programme of Post-Basic Education, *op. cit.*, p. 109.

TABLE B: **Individual Student's Earnings in 1952-53, Grade XI**

A Student below average CRAFT	Hours	Earnings			A Student above average CRAFT	Hours	Earnings		
		Rs.	as.	ps.			Rs.	as.	ps.
1. Weaving 17 yards	650	23	15	—	1. Agriculture	625	78	2	—
2. Kitchen	77	9	11	—	2. Animal husbandry	384	55	8	—
3. Agriculture	75	9	7	—	3. Social service	276	21	6	—
4. Health work	88	18	—	—	4. Poultry	36	4	8	—
					5. Kitchen and stores	122	15	4	—
Total	890	61	1	—	6. Tailoring	12	1	8	—
Expenses for 11¼ months		214	—	—	7. Bakery	40	5	—	—
Percentage of self-sufficiency		29%							
Cloth woven in addition for personal use		8 yards			Total	1495	181	4	—
No earning during one month due to sickness.									
					Expenses, 12 months		288		
					Percentage of self-sufficiency		80%		
					Cloth woven for personal use		12 yards		

Source: Picture and Programme of Post-Basic Education, op. cit., p. 110.

TABLE C: **Summary of Four Years' Work 1949-53 (a regular student)**

Craft	*Particulars*	*Months*	*Hours*	*Earnings*		
				Rs.	as.	ps.
1. Agriculture	Dry crops, vegetables, poultry	22	1735	216	13	6
2. Animals and dairy	Co-operative dairy management, dairy farming	6	683	85	6	—
3. Village crafts	Carpentry, oil pressing, apiary, etc.	5	293	36	10	—
4. Community service	Kitchen, health etc.	4	730	91	4	6
5. Social services	Adult education, exhibitions etc.	2	530	66	3	6
	Total	39	3917	496	5	6
	Average no. of hours spent on craft each month		102			
	Weaving for personal use: 36 yards of cloth					
	Total months resident in Sewagram	41* cost of maintenance		746		
	Overall self-sufficiency attained			66%		

*Note: Out of 48 months, 4 months 'holidy, 3 months' practical work outside Sewagram.

Source: Picture and Programme of Post-Basic Education, *op. cit.*, pp. 109-111.

Appendix II

Correlated Teaching

A. SPECIMEN OF CORRELATED TEACHING

The Cultivation of Bananas (1951 class).

1. *General considerations*

Educational and economic importance of the crop. It stands throughout the year, needs attention throughout the year, and is continuously in production for the use of the community.

Area under cultivation 2½ acres. Measurement and calculations.

2. *Value of the crop*

Nutritional value of the fruit. It is rich in carbohydrates and fructose and contains vitamins. Study of the main food ingredients necessary to health and the value of those contained in the plantain. Compare the fruit with other fruit and food crops cultivated on the farm with respect to its nutritional value.

High tonnage yield per acre; compare the acreage yield with that of other fruits and vegetables such as tapioca and sweet potato. Calculation of yield and dietetic value. Study of the food shortage of the country and the place of the plantain in planning to make up the deficit. Study of statistics of population and food supply.

Other uses of the plantain-production of rope, paper, cloth and fibre.

3. *Conditions for cultivation*

Climate—tropical and sub-tropical; countries in this zone which are important growers of bananas; why some others do not grow them; regions of India favourable for cultivation.

Soil, a medium well-drained soil is needed. Type and classification of soils. Properties of local soils, their names and the crops for which they are suited. Presence of lime in the soil; methods of testing for lime; qualitative analysis with hydrochloric acid; use of litmus paper.

4. *Processes of cultivation*

(a) Selection of site; higher elevation needed, use of spirit level.
(b) System of plants: square, triangular, hexagonal and retangular plots.
(c) Spacing of plants: area needed by a single plant, distance between plants; number of plants to a given area, area needed for a given number of plants.
(d) Selection of plants: propagation by suckers, comparison with other plants; classification of root and stem systems.
(e) Planting: to be in the centre of the pit. Finding the centre of a triangle, circle, square, hexagon etc., for the purpose.
(f) Manuring: Need for heavy manuring: the reasons for it; the three food elements needed by the plant—potassium, phosphorus and nitrogen—and how these can be supplied; organic and inorganic manures; cowdung compost: Amount of manure needed; quantity and weight of one cartload, one basket etc., weight of one cubic foot of manure.
(g) Irrigation, mulching and weeding:
Water needs of banana; quantity required; sources of irrigation, means of irrigation; work done per hour by

various types of water lifts; acreage. Fork after every irrigation, do not allow weeds to grow. Why not? Mulch-creation of an artificial loose surface to prevent loss of water through evaporation. How this is achieved. Implements used, locally, in other parts of the country, abroad; their use, mechanics and efficiency. Artificial mulch with paper, sawdust, straw etc.

(h) Growth of the plant: Habit of growth. Study of the flower. Complete and incomplete flowers; function of pollen and pistil. Hermaphrodite flowers. Comparative study of the flowers of Papita, "lady finger", cotton and pumpkin.

(i) Harvest: Formation of fruit and its development. How to recognize the developed fruit. Change in coloration. Compare tomato, chillies. Nature's method of ensuring dispersal of seed by attracting birds and animals to the fruit. Method of controlling bird and animal attacks. Physical development and chemical changes in the maturing fruit. Loss of weight. Formation of sugar.

(j) Curing: Naturally on the tree; artificially in rooms by smoke and other methods. Record of numbr of percentage of fruits ripened. Scientific principles involved in the process.

(k) Disposal: Visit to a fruit-market; the problem of the middleman. Co-operative selling organisations, their advantages, their rules. Organisation of a co-operative store. Sale of fruit through co-operative stores.

(l) Assessment of the project: Cost accounting, book keeping, production per acre, cost of cultivation and profit per acre.

B. WORK-STUDY CORRELATIONS

Short Summary of Subjects in General Science covered in 1950-51

Note: These topics were taken correlated with the work done. Hence the subjects were dealt with as a coordinated whole, each situation being viewed from all its aspects, involving different branches of science. A study of "The Air around us", for example, involved Biology, Physics and Chemistry, the approach being through the biological uses of air, and the subject being developed to show how it affected other aspects of our everyday life. Other topics were studied in a like manner in connection with the work in agriculture, dairying etc. For convenience, to show how much subject matter has been covered, the topics are grouped together here under the different sciences.

Botany: Flower—types of flowers—parts of a flower-pollination—fertilisation—development of fruit—dispersal of seed.

Seed—parts of a seed—germination—conditions favourable for germination.

Leaves—types of leaves—function of leaves—photosynthesis —respiration—transpiration.

Herbarium—collecting and pressing leaves and flowers. Pressing and preserving them.

The different plant families—their characteristics and their physiology were dealt with in detail, in connection with the different cultivated plants.

Zoology: In this branch most of the work was done in connection with the Dairying and Animal Husbandry and is dealt with in detail in the work programmes.

Anatomy and physiology of animals.

Entymology: Vertebrates and Invertebrates. Common insects, their characteristics—the house fly—the spider and honey bee. Moths, butterflies and their caterpillars—Beetles and weevils.

Human Biology: The chemical composition of the human body—the body cells—tissues—metabolism.

Dietetics: The role of food—Energy requirements—Basal metabolism—Activity requirement—Calorie computations. Factors affecting calorie computations—Recent work in energy requirements—FAO recommendations.

Proteins—Carbohydrates—Minerals—Vitamins—Pro-Vitamins, Anti-Vitamins—Deficiency diseases.

Calculating food values of diet—Food chart—Costing of food—Calculation of food requirements of a mixed community of adults and children of varying ages and both sexes.

Calorie and cost graphs. Balanced diet—comparative diagrams—Balancing the kitchen budget and the diet—maintaining accounts of a community kitchen.

PHYSICAL SCIENCES

Physics

The environment—(a) Matter—Mass—Density—Atoms—Atomic structure of the elements and compounds (b) Weight—The common balance—Principle involved—How to use the balance. (c) Density—Methods of determining density. (d) Hydrometers and Isometers—The Principle of Archimedes—The Law of flotation—Nicholson's hydrometer.

The Air: Pressure and volume—Variation of pressure with altitude—Boyle's law—Volume and temperature—Charles' law—Pumps—Lift pumps and force pumps—The use of the pressure of the confined gases to drive pistons and petrol engine.

How an aeroplane, a balloon and an air ship fly—Caissons.

Chemistry

A world of change—(1) Oxygen in a world of change—The composition of Air—Oxidation—Combustion—Preparation and properties of Oxygen. (2) Carbon Dioxide—Preparation and properties—Soda Bicarbonate and H_2SO_4. Fire extinguishers (3) The fire-Oxygen and Carbon Dioxide. The need for draught—Liquid and solid fuels—Ignition temperature of solids—Flash temperature of liquid fuels—Difference between spirit and Kerosene oil—Petrol.

Mathematics

Aspects of mathematics were studied in correlation with other aspects of everyday life. These were studied not separately as Arithmetic, Algebra and Geometry but as parts of one whole.

Arithmetic: Notation—Four rules—Fractions—Decimals—Percentages—Units and Powers—Roots—Averages and means—Ratio-proportion—time and work—time and distance—Approximation—Conversion—Profit and loss (sufficient drilling comes about automatically by maintaining the records of daily work and by working out the accounts of the various departments).

Algebra: Its uses—Four rules—Fractions—Simple equations.

Geometry: Straight lines— Properties—Parallel straight lines. Bisectors—Vertical bisectors—Angles—etc. The right angle—Practical uses of the right angle. The Triangle—Types of triangles and their properties.

Square and rectangle—their diagonals and other properties.

Plane drawing: Selecting a scale-making the rough sketch—Taking measurements, drawing the layout of buildings and fields.

Mensuration: Units—Rectangle—Triangle—Parallelogram—Circle—Cylinder—Cone—Sphere—Latitude and Longitude Volume.

Trigonometry: Principles—Angles and their ratios—Simple solution of triangles.

Coordinate Geometry: Co-ordinates and their use. Distances, straight lines—Simple graphs and their interpretation.

Logarithms and their use.

NOTES AND REFERENCES

1. *Picture and Programme of Post-Basic Education*, edited by Marjorie Sykes, Hindustani Talimi Sangh, Sewagram, Wardha, pp. 106-108.
2. *Ibid.*
3. *Ibid.*, pp. 123-127.
4. *The Report of the Fifth All-India Basic Education Conference*, Perienayickenpaleyam, 1949, p. 110.
5. Harringhurst: *Human Development and Education*, Longman Green and Co., New York, 1953 (reprinted in 1961), p. 120.

TEN

UNIVERSITY EDUCATION

I

INTRODUCTION

Gandhiji was one of the most daring of men. He was also one of the most cautious. His most revolutionary acts had behind them years of preparation, when he was laying brick by brick with the greatest care. When he put his scheme of basic education before the nation, he had years of experience behind it in South Africa and in his Ashram schools in India. When he came to post-basic education, his advice to his colleagues was to avoid impressive blue-prints, avoid premature publicity, take the boys who had come out of the basic schools, examine carefully their attainments, study their needs, and then come out with a plan, with these boys strictly in view. The experience gained should guide them further. It was this down to earth, modest approach that Vinoba Bhave, Gandhiji's spiritual heir, put before the Higher Education Sub-Committee of the Hindustani Talimi Sangh in October 1952, when the question came up for providing higher education for those who had completed their post-basic course in 1951. Addressing the Committee he said: "a simple, straight-forward necessity is before us to which we should confine ourselves. The subject of universities is so vast that otherwise discussion will range far and wide and there will be nothing to show for it. I suggest that we should not enter upon any discussions of the universities as such. It may be that we shall not produce a complete system, but what we need to consider is how to give these students a complete education, and what programme we should draw up for them. If we start from that angle, we shall be able to decide upon one step, and get some glimpse of how that step should be followed up."[1]

So when higher education was being planned for those who had completed post-basic education, the workers of Nai Taleem had before them the broad statements of policy Gandhiji had made in his life-time in regard to Nai Taleem in general and higher education in particular; "the national necessities" he had identified so recently; and the capacities and needs of those who had come out of post-basic schools.

II

GANDHIJI'S BROAD GUIDELINES

Because of Gandhiji's main preoccupation with the masses and with rural India, many people thought that Gandhiji was not interested in university education. They also began to identify him with a "bullock-cart economy", where they felt there was no room for the higher and sophisticated knowledge given in the universities. To this Gandhiji's reply was: "I have not pictured a poverty stricken India containing ignorant millions. I have pictured to myself an India continually progressing along the lines best suited to her genius. I do not, however, picture it as a third class or even a first class copy of the dying civilisation of the West. If my dream is fulfilled, and every one of the seven lacs of villages becomes a living republic in which there are no illiterates, in which no one is idle for want of work, in which every one is usefully occupied and has nourishing food, well ventilated dwellings, and sufficient Khadi for covering the body, and in which all the villagers know and observe the laws of hygiene and sanitation, such a State must have varied and increasing needs, which it must supply unless it would stagnate".[2] And again, " . . . we should have an army of chemists, engineers and other experts who will be real servants of the nation, and answer the varied and growing requirements of the people who are becoming increasingly conscious of their rights and wants".[3] His advocacy of liberal granting of university[4] charters to any body of persons of proved worth and integrity also showed that he was not for restricting higher education. He declared: "I am not opposed to education even of the highest type anywhere in the world". As a matter of fact he claimed that under his scheme of higher education "there would be more and better libraries, more and better laboratories, more and better research institutes".[5]

Opposition to the prevailing system

What he was really opposed to was the present system of university education which had done incalculable harm to the country. The existing universities had been imposed from above under foreign domination and did not come up "from bottom upward". Consequently, they did not reflect the popular will and did not grow to meet national needs. The result was that they were not wanted by the country and their products were consequently unemployed. Being primarily book-centred education in our universities adversely affected the physical health of the students. Lack of value orientation led to mental ill-health. "It is my firm conviction", said Gandhiji, "that the vast amount of the so-called education in arts, given in our colleges, is sheer waste and has resulted in the unemployment among the educated classes. What is more it has destroyed the health, both mental and physical, of the boys and girls who have the misfortune to go through the grind in our colleges".[6]

Again, while India was mainly rural, they were urban centred. They draw the best students from the villages and permanently alienated them from the rural environment, making them indifferent to and incapable of solving rural problems. This continued drain of talent from the rural areas leads to their progressive decline. No wonder Morgan says: "We have asked many educators and others what has been the contribution of the Indian universities to the Indian villages.

With few exceptions the answers have ranged from 'nearly nothing' to 'absolutely nothing'." This progressive decline of the village under the influence of universities is well brought out by Baker Brownell.[7] "When the college becomes overwhelmingly an influence towards the aggrandisement of urban society with the corresponding impoverishment of our small communities, it is no longer good. When this community is dissolved, human life breaks down biologically, morally even intellectually, and human education becomes futile. College education is one of the erosive forces that cause our small communities to wash away under our feet".

Another feature of our universities against which Gandhiji's democratic conscience revolted was its costliness and consequently elitist character.

But perhaps the worst feature of university education, according to Gandhiji, was the foreign medium of instruction, which had far-reaching effect on our minds, terribly strained our energies and surreptitiously denationalised us, making us carbon copies of the West instead of original and creative thinkers. The geniuses whom this system had produced were great not because of the system but in spite of it. And even then their knowledge became "a circumscribed possession", "not for trnasmission to the masses".[8] He said : "The medium of a foreign language through which higher education has been imparted in India has caused incalculable harm and moral injury to the nation. We are too near our times to judge the enormity of the damage done. And we who have received such education have to be both victims and judges—an almost impossible feat".[9] Macaulay had rightly prophesied that English education would produce people who would be Indians in blood and colour but English in habits of thought and feeling. Gandhiji illustrates this tragedy by his own example:

"Up to the age of twelve, all the knowledge I gained was through Gujarati, my mother tongue. I knew then something of arithmetic, history and geography. Then I entered a high school. For the first three years the mother tongue was still the medium. But the school master's business was to drive English into the pupil's head. Therefore more than half of our time was given to learning English and mastering its arbitrary spelling and pronunciation. It was a painful discovery to have learn a language that was not pronounced as it was written. It was a strange experience to have to learn the spelling by heart. But that is by the way, and irrelevant to my argument. However, for the first three years, it was comparatively plain sailing.

"The pillory began with the fourth year. Everything had to be learnt through English—geometry, algebra, chemistry, astronomy, history, geography. The tyranny of English was so great that even Sanskrit or Persian had to be learnt through English, not through the mother tongue. If any boy spoke in the class in Gujarati which he understood, he was punished. It did not matter to the teacher if a boy spoke bad English which he could neither pronounce correctly nor understand fully. Why should the teacher worry? His own English was by no means without blemish. It could not be otherwise. English was as much a foreign language to him as to his pupils. The result was chaos. We, the boys, had to learn many things by heart, though we could not understand them fully and often not at all. My head used to reel as the teacher was struggling to make his exposition on geometry understood by us. I could make neither head nor tail of geometry till we reached the 13th theorem of the first book of Euclid. And led me confess to the reader that in spite of all my love for the mother-tongue, I do not to this day know the Gujarati equivalents of the technical terms of geometry, algebra and the like. I know now that what I took four years to learn of arithmetic, geometry, algebra, chemistry and astronomy, I should have learnt easily in one year, if I had had to learn them not through English but Gujarati. My grasp of the subjects would have been easier and clearer. My Gujarati vocabulary would have been richer. I would have made use of such knowledge in my own home. This English medium created an impassable barrier between me and the members of my family, who had not gone through English schools. My father knew nothing of what I was doing. I could not, even if I had wished it, interest my father in what I was learning. For though he had ample intelligence, he knew not a word of English. I was fast becoming a stranger in my own home. I certainly became a superior person. Even my dress began to undergo imperceptible changes.

What happened to me was not an uncommon experience. It was common to the majority.

"The first three years in the High School made little addition to my stock of general knowledge. They were a preparation for fitting the boys for teaching them everything through English. High Schools were schools for cultural conquest by the English. The knowledge gained by the three hundred boys of my High School became a circumscribed possession. It was not for transmission to the masses.[10]

The richness of the English language and literature is often given as the reason for education through English. To this Gandhiji's reply was: " . . . the nobility of its literature cannot avail the Indian nation any more than the temperate climate or the scenery of England can avail her. India has to flourish in her own climate and scenery, and her own literature, even though all the three may be inferior to the English climate, scenery and literature. We and our children must build on our own heritage. If we borrow another, we impoverish our own. We can never grow on foreign victuals".[11] English literature and all great literature of the world we can read through good translations. "It is the boast of Englishmen that the best of the world's literary output is in the hands of that nation in simple English, inside of a week of its publication".[12] If they can why could not we? But "Our masters chose the wrong way for us and habit has made the wrong appear as right".[13] The evil of slavery to English has become so "deep-seated" that only a "heroic remedy" could deal with it. "I find daily proof", he said, "of the increasing and continuing wrong being done to the millions by our false de-Indianising education".[14] And, therefore, "The medium of instruction should be altered at once and at any cost, the provincial languages being given their rightful place. I would prefer temporary chaos in higher education to the criminal waste that was daily accumulating".[15] He saw the dangers of inertia born of habit : "But the agreement of my critics, on the two main points, medium and the realities, cannot lull me to rest. They have criticised and tolerated all these many years the existing system. If we mean business, in a year's time we shall find that we need never have been party to the tragic waste of the nation's time and energy in trying to learn the essentials of culture through a foreign medium. The condition of success is undoubtedly that provincial languages are introduced at once in the government offices and courts, if the provincial governments have the power or the influence over the courts. If we believe in the necessity of the reform, we can achieve it in no time."[16]

The New Directions

Gandhiji wanted university education to be "organically related to the Indian scene. It must therefore be an extension and continuation of the Basic Education Course"[17] which had been conceived strictly keeping in view the Indian social reality. While the full-fledged co-operative community living, permeated by the spirit of free and critical enquiry—characteristic of scientific temper—and in active interaction with the natural and social environment, was to be the medium of education at the university stage—as at the earlier stages—the Pole Star was still to be the rural handicrafts. On their improvement and upgradation through the educational process depended the removal of India's poverty and the capacity of the university to be self-supporting, which was to be its central principle—even more so than at the basic and post-basic stages.

In 1938 he had said: "Universities must be made self-supporting. The State could simply educate those whose services it would need. For all other branches of learning it should encourage private effort".[18] Even in 1937 he had written: "I would revolutionise college education and relate it to national necessities". Colleges should be supported by those who would need them—industries, hospitals, commercial houses, private individuals etc. So when in 1947 there was pressure for founding new universities by the provinces, he said: "In my opinion it is not for a democratic State to find money for founding universities. If the people want them they must supply the funds. Universities so founded will adorn the country which they represent".[19] This question of self-support gained a further dimension with the experience of basic and post-basic education. In regard to post-basic education Gandhiji had contemplated that all basic needs of the community of students, teachers and their families would be met by their joint productive activities. That had fairly been achieved. While Gandhiji was no more there when the question of the Nai Taleem university was discussed, it was obvious that in the spirit of Nai Taleem, this principle should be applied with still greater thoroughness and possibility of success at the university stage. Vinoba Bhave gave expression to this idea in his concluding address to the Sub-Committee on Higher Education set up by the Hindustani Talimi Sangh in its meeting on 11-12 October, 1952: "Kishorelal Bhai had asked that if the boys in their post-basic course could support themselves, why should not they and their teachers be able to support themselves as they study when they went to the university". This was necessary, felt Vinoba, not only because of our poverty but also for sound educational reasons as was enjoined by the Shastras that when a son had attained the age of sixteen he should stand on his own feet. In contrast, the prevailing system was continuous education in progressive dependence and the "study grows more costly and less useful". The student is first dependent on his parents. Then on government to provide him a job and maintain him while he is in "service", and then to give him pension so that "he remains dependent till the day of his death". "In rural universities", in contradistinction, "the teachers and students should be provided with whatever books they need, and also the implements and land which are necessary and some buildings. The rest they should build up themselves. They should be told that they will receive nothing further. Teachers and students should then live together and together show the country an example of complete living on the highest level. No doubt there will also be learning, discussion. experiment and research, the results of which will be given to the public. But the chief contribution will be that teachers and students should stand on their own feet and earn their bread by the work of their own hands, not in a haphazard sort of way, but by making their work a demonstration of excellence. They will set a standard of achievement in work, in learning, in the making of tools, in the building of houses. in all these and other ways".[20] Self-reliance, self-support were to be the key to their new university. The Sub-Committee's recommendation was as follows:

> "It is inherent in the educational philosophy of Nai Taleem that the Rural University should be no financial burden to the State and the community, but maintain itself through productive activities and service to the surrounding rural areas, provided that the capital expenditure in the shape of land, buildings, equipment for work, study and research are provided by the State or Society".[21]

Utmost emphasis was to be laid on continuation and further development of habits and attitudes required for the new social order visualised by Gandhiji. "Today", he said, "the youth educated in our universities either ran after government jobs or fell into devious ways and sought outlet for their frustration by fomenting unrest. They were not even ashamed to beg or sponge upon others. Such was their sad plight. The aim of university education should be to turn out true servants of the people, who would live and die for the country's freedom". The values that Nai Taleem sought to inculcate were service instead of acquisitiveness and self-aggrandisement, co-operation instead of competition, self-relianee instead of dependence, dignity of manual labour and equality of all work, and finally, the scientific temper, approaching our heritage and the life around us in a spirit of critical enquiry combined with reverence, so that if there is any rejection of the accumulated experience, represented in tradition, it is done after proper examination and not out of hand, as so often happens in the process of "modernisation".

Another requirement from the Nai Taleem university would be that it should be based on "national necessities". At present, they are food, clothing and shelter. Society however, changes and so will education have to change to meet the changing societal needs.

The medium of instruction was to be the regional language of the area in which it was situated. It presupposed change in the language of the courts and the administration for the proper development of the regional language in the university.

The method of education was to be problem-centred and life-centred, linking knowledge of the various subjects with the problems through correlation, with a view to finding solutions for them.

III

STUDENTS' CAPABILITIES

While designing the Nai Taleem University—as many people preferred to call it—another parameter was the capacities and the proclivities of the boys and girls coming out of post-basic schools. They had experience of twelve years of co-operative community living and skills required for self-reliance in meeting their basic needs while living simple, healthy and aesthetically satisfying life. Each one had also developed sufficient competence in one productive activity to support himself and his family therewith. His subject knowledge was of the higher secondary standard and he was intellectually equipped to pursue further studies in a university. "Experience has shown that students at this (post-basic) stage can maintain themselves through their work and are ready, at the end of their course for the responsibilities of adult family life, in one or the other of the normal productive occupations of humanity or for some form of professional training in a University".[22] The student was, in addition, a harmoniously developed individual, alert in mind, resourceful, with initiative and trained leadership. He was also imbued with the scientific temper and a spirit of free and critical enquiry combined with love and reverence for his cultural heritage and system of values embodied therein and found on critical enquiry to be as relevant today as before.

IV

THE NAI TALEEM UNIVERSITY AT SEWAGRAM

To draw up a scheme for establishing a university at Sewagram, the Hindustani Talimi Sangh set up a Higher Education Sub-Committee. The Committee drew up a scheme in outline for work in Sewagram, especially for those who had completed the post-basic course. The committee laid down the following general principles for selecting the faculties of study and research, admission of students thereto etc.:

> "1. The ultimate objective before this university is not only a balanced and harmonious individual life, but a balanced and harmonious society, and that this objective can be achieved best through activities and studies leading to an all-round development of the local community by the use of local resources in material, talent and labour.
> 2. The educational programme of courses of study at this stage will therefore be organised around basic national needs and not the orthodox faculties or departments of a university.
> 3. It is inherent in the educational philosophy of Nai Taleem that the Rural University should be no financial burden to the State and the community, but maintain itself through productive activities and service to the surrounding rural areas, provided that the capital expenditure in the shape of land, buildings, equipment for work, study and research are provided by the State or Society".[23]

The duration of the courses would normally be three years, which was the minimum period required for imparting the minimum necessary standard of general knowledge and the required citizenship training.

Students having attained the age of 18 and having satisfactorily completed the post-basic course could be admitted provided they had "the necessary qualities of initiative, perserverance and power of independent work and thought"[24] for studying at the university level. He was also to have the necessary "mental attitude and habits" for fulfilling the social objectives of Nai Taleem.

The medium of instruction at the Sewagram university should be Hindi—the medium of instruction at the basic and the post-basic stages. This, however, was not intended to prejudge the issue of the medium of instruction (regional or federal language) in other rural universities that might be set up later.

The method of study was to be problem-centred, directed, to the problems faced by the student in his field work. The staff would direct the work of the student primarily through a tutorial or seminar system and by directing his library, laboratory and field study, "formal classes taking a subordinate place". The individual student would plan his own courses in consultation with his tutor in the light of his own individual needs. In organising these courses there was to be the maximum of elasticity. Each student, while planning his work was to keep in view the following four major inter-related objectives:

"A—*Vocational*—The mastery of the practice and theory of profession or calling of immediate service to the rural community.

B—*General*—A comprehensive understanding of the physical and social environment of the regional area ef service.

C—*Social*—The development of necessary attitudes, knowledge and skill for playing his part effectively as a citizen of India and the world, and a sense of social responsibility.

D—*Cultural*—Each student in accordance with his own taste and ability should undertake study at University level in one of the following: Music, Fine Arts, Literature; and all should gain some insight into the vast possibilities of general education/through the celebration of festivals".[52]

The Committee recommended the setting up of the following faculties:

1. Agriculture and other allied industries.
2. Animal Husbandry and Dairying.
3. Food Technology and Nutrition.
4. Rural Industries.
5. Rural Public Health.
6. Rural Education.
7. Rural Engineering.
8. Khadi Vignan.

The scope of each of these faculties was discussed and embodied in detailed syllabi and is broadly indicated below:

The faculties of *Agriculture and Animal Husbandry and Dairying* will give comprehensive training in every aspect of their respective subjects and subsidiary branches of knowledge organically connected with them.

The faculty of *Food Technology and Nutrition* will teach how to avoid waste and utilise to the maximum the food value of the products of agriculture, horticulture and animal husbandry. It will deal with efficient methods of storing and preserving food stuff which are or can be within the means of the ordinary village. Choice of diets and food preparation will also be within its purview.

Immediately, the faculty of *Rural Industries* will seek to develop those industries on a scientific basis for which raw materials are locally available and the products of which can be locally consumed.

The faculty of *Rural Public Health* will aim at producing 'general practitioners' who understand the family environment of their patients and can give, "general medical advice and ordinary treatment in the homes, referring complicated cases to nearby specialists."

The faculty of *Rural Education* will prepare teachers for pre-basic and basic schools and rural adult education, giving them sufficient general and sociological background knowledge and professional skill. Teachers for post-basic education should have completed the course in one or the other university faculties before joining the training courses. The faculty will also organise general and cultural courses for students of other faculties, as well as studies in general sociology and psychology.

The faculty of *Rural Engineering* will train engineers for constructing private houses, public buildings, roads and irrigation schemes in the rural areas with the maximum use of local materials and keeping the needs of the rural population in view.

The Committee was, however, of the view that there should be no faculty for training students for *Rural Administrative Service*. Nai Taleem regarded it as a "service" and not as a career. In rural service every student, right from pre-basic, through basic and post-basic, was trained, in both the practical and theoretical aspect of rural service. This knowledge and capacity was to be deepened in the case of every student at the university stage.

Courses required by two or more faculties would be arranged by the faculty most concerned and competent to handle a particular course, with students from other faculties allowed to join. The time table would be suitably arranged to enable all students desirous of participation and able to take advantage of a particular course.

Based on the recommendations of the Higher Education Sub-Committee work was started in 1952 at Sewagram on a rural university as the coping stone of the edifice of pre-basic, basic and post-basic work that had been built there as a result of the work that had been going on there since 1937 under Gandhiji's direct guidance. The conception of the Rural University according to the principles of Nai Taleem, it was stated, "is based on the experience of the last fourteen years' work in basic and post-basic education and carries educational work one stage further. It follows, therefore, that the courses of study, the method and organisation—the educational programme will be a continuation and further development of this experience on a higher level".[26] The courses of study were to be based on the most urgent national needs—food and shelter, employment, health and education and a clean and devoted band of workers, social servants and administrators, from the village level upwards—and not on the model of the faculties and departments of an orthodox university. Attempt was also to be made for coordination of work in the university and those of the rural development departments of the Government, thereby linking, to mutual advantage, rural service and rural education. For as the University Education Commission Report stated, "it would be a great loss to India for the varied rural services to develop without such coordination with rural education".

V

THE MORGAN MODEL

An important event in the development of the idea of the rural university on Nai Taleem lines was the model of the Rural University presented by Dr. Morgan in his Memorandum on

Higher Education in Relation to Rural India on which the chapter on Rural Universities in the University Education Commission Report (1949) was based. Coming as it did from one of the most creative thinkers on education and development from one of the most developed countries of the world, his underlining of the Gandhian analysis of rural poverty and its removal through education, in spite of subtle differences between the two approaches, was in refreshing contrast to the indifference, if not hostility, of university circles and the intellectual elite in India, and had an importance of its own. The final incorporation of the approach in the Report of the University Education Commission was a great help and support to the workers of Nai Taleem, who were perhaps feeling a little forlorn after Gandhiji's death. Even the differences could be helpful in stimulating thought—so important during the experimental stage in which the development of Nai Taleem at the university stage was at that time. There was close interaction between Morgan and the workers of the Hindustani Talimi Sangh. The Sangh published his Memorandum and some of his related writings to make them available to the Indian public. This exchange of experiences was so fertile, that any discussion of Nai Taleem, especially at the higher stages, would be incomplete without a discussion of the Morgan model. But as it has subtle differences with the Gandhian approach, it must be presented as a whole, though in juxtaposition with Gandhiji's thought. Like Gandhiji, Morgan looks at university education not in isolation but in the perspective of India's overall development. He says:

> "To reach a judgement as to the major overall needs of India, and of the suitability of the present university education system to meet those needs, requires that the system be viewed from outside itself, as a part of the whole life of India.
>
> "It is difficult to see how sound conclusions concerning university education can be reached except in relation to the entire educational needs and the whole destiny of the nation".

It is in India's interest that her population remains widely distributed and her villages should become economically prosperous and culturally rich to hold its youth, who otherwise migrate to the towns, leading to progressive decay of the villages. Looking at rural development in a world and historical perspective Morgan points out: "Most of the evidence obtainable over the world indicates that the villages are the source of population while the cities are the burial grounds of the families that come to them".[27] Civilisations rise and fall. "One of the causes, if not the chief cause, of such collapse of civilisations is that cities draw the life from villages returning almost nothing, until the current village sources of culture and energy are exhausted, whereupon the whole civilisation declines".[28] This was a constant refrain in Gandhiji's writings. Development of villages into vigorous basic units of society, is, therefore, of fundamental importance to India's survival and growth.

Morgan enumerates four causes of the decay of the village in India. "The first of those is the habitual robbery and the despoiling of the village by those in power. The government and the rest of society are parasites who have sucked its life-blood in taxes, rent and interest on debts. The villager, who supplies the nation with food and fabric, is himself stripped of everything but a mudhut, a worn garment, a mat to sleep on and simple tools for his work. Such exploitation has become almost the foundation of national wealth and culture".[29] And "The process has gone so far that its elimination without the destruction of the national culture will be a difficult and delicate undertaking".[30] A fundamental change in public policy in regard to land ownership, tax laws etc., is essential. Taxes on land should either be largely eliminated or income from them should be returned to the village or spent directly in their interest. "No pious expressions of interest in the villages will be more than hypocrisy except as those wishes find expression in public polity".[31] The widespread corruption among "those with whom the villagers must deal" is the second hurdle in the path of rural development and results "from centuries of conquest and exploitation". The "general absence of the open enquiring mind and of the scientific spirit" due to "the rigid cage of caste and tradition" is the third handicap to rural development. And finally, the absence of a clear picture of what an ideal village should be like. Gandhiji had given his idea of an ideal village and Nai Taleem worked on the basis thereof but it was not a generally accepted picture reflected in government policy.

The picture of the ideal village that Morgan visualised was that a large part of the industry would be located in the villages (and small towns). The infrastructure in the form of transport, electric power etc., would be provided. Agriculture would be modernised. Basic amenities like piped water, a sewer system, etc., would be provided. Along with the economic and hygienic facilities, there would be emphasis on developing character and culture. "The limitless ranges of science, arts, industry and agriculture will furnish endless opportunity for pioneering to whoever has a mind of curiosity".[32] The village will not be a self-sufficient and self-contained unit. That is, not possible under modern conditions but "it can become far more important as a basic unit of society, out of which the larger society is built".[33] The inter-relation between the various units "will be best if each of the units has a vigorous, definite existence of its own, while it co-operates with other units. Even when a normal and wholesome degree of local self-sufficiency has been achieved by the villages, a constantly increasing part of local needs will be supplied from a distance, and must be paid for by the export of produce and services".[34] He is of the view that "the best degree of local self-sufficiency should be the aim".[35] If modern industry can be developed in the villages under good social controls, there can be employment for those not needed in agriculture, as agriculture is modernised. And India's industrialisation can take place without exploitation.

Gandhiji also was not for "primitive methods" but he wanted to begin at the technological level of the mass of the people and evolve from it a higher and higher technology in doses which they could absorb, so that technology did not run away with them. Change was inevitable and was to be welcomed but it should not become unmanageable and disrupt the social fabric, leading to chaos, and untold misery to the weakest, whom it should be the major concern of development to help—if development was to mean anything in a poor country like India. In regard to agriculture, his view was that we should first of all carefully husband the resources of human, animal and vegetable waste for fertilisers and use them as the first priority. It was economical and in the best interest of conservation of our land resources and human health. Villages should be self-sufficient in regard to their essentials and thereafter interdependence could develop to the maximum possible degree. That was the only way of establishing non-exploitative relationship between the various units.

Apart from this subtle difference, there was very close correspondence between Gandhiji's thought and Morgan's in regard to rural development and the role of education therein from the pre-basic stage to the university. India was rich in natural resources. The determining factor would be faith in themselves, hope, good will, courage, character, skills, experience and culture of the people, which it should be the role of education to develop. The educational institutions should be so built and conducted, that they act as demonstrations of what an ideal village could be and how it could be built. Village planning should be based on the best existing traditions with such modern additions as could harmonise with them and improve them. The basic school, the post-basic school and finally the Rural University would provide the leadership at various levels to infuse in the people the development qualities and skills required. The role of government was to provide permissive legislation and allow the people to develop themselves through millions of local projects, depending on local resources and local initiative, providing technical assistance and supervision, where needed. These specialists and technocrats would also need to have an understanding of local traditions and skills. The Rural University could best provide such expertise. "Local projects", says Morgan, "may become a school for democracy, thrift and responsibility".[36] Gandhiji would have fully agreed with it.

In line with this spirit of self-reliance was Morgan's support of Gandhiji's basic idea of a self-supporting education. Cost should be kept down by adopting simplest possible living standards, adopting the method of self-directed study, which will require less staff, apart from its educational advantages; and performing all work—physical and clerical—by the students and staff. Economic activities and services to the villages around should bring in additional income. Gandhiji would have agreed with all this. It was essential to use modern methods for industries: "If methods can be used which give a high degree productivity to human labour, then the chances for contributing to self-support may be greatly increased".[37]

Another aspect of rural education stressed by Morgan, which Gandhiji would have enthusiastically supported, was the importance he attached to women's education. "While women's education has made great advance in India, it is in the field of basic education that it has fully come into its own. This emphasis on the all-round education of women should continue to be maintained throughout the rural education programme".[38] "Probably there would be no quicker way to raise the general standard of economy and efficiency in Indian life than to make women interested in the efficient, economical and convenient planning and management of their homes".[39]

An outline of the Rural University as visualised by Morgan and as finally incorporated in the University Education Commission Report may now be given. Briefly, the idea was that the university with a ring of colleges around would provide the core of general education—consisting of humanities, physical sciences and the life sciences—to under-graduates and, in addition, provide specialisation of a professional character to each student, suiting his capacity and aptitude. A person could be an under-graduate in some subjects and a post-graduate in others. There was to be considerable flexibility in the whole system. Half the time of the student would be spent in studies and half in practical work. The skill of hand and the skill of mind were to be combined, each being looked upon as an equal in dignity and worth. While no specialisation would be ruled out, special facilities would be provided for specialities related to rural life. Professional courses were to be multi-disciplinary and provide a student with all the competence he would require to handle all phases of a job well and efficiently. The courses would take care of not only today but also of tomorrow. The university was to have considerable freedom for creative education which would be required by its flexible and adaptable approach to its programmes. The students would be prepared for administration and leadership in various fields of education, in agriculture and industry to meet the many challenges and opportunities which development in the rural areas would throw up. The aim of the rural university would be "the development, enlargement and refinement" of the design of development chosen by the country.

Rural education would not prepare people only for the traditional professions but would raise as many useful occupations as possible—which in "outlook, skill and spirit of service" could be so raised—to the status of professions. Professional men prepared by the rural university would have "simple and unostentatious living which is (was) not a burden to society". They would not aim at "a standard of living far beyond the hope of achievement of the general population, even in a well ordered society". Such a spirit should pervade all educational institutions but the rural university was to do pioneering work in this regard. Such a university would require men who had attained the mastery of traditional knowledge and yet had committed "their lives and all they have (had) to the service of their fellowmen". The Report goes on to add: "As such men find each other and work together they can create the basic elementary school, the rural secondary school and the rural university, and through them the new India".[40]

An important source of education would be identification with and participation in the common life of the people and the great traditions that it embodied. In the process the students and teachers would be improving and enlarging these traditions. The community life organised on the pattern of that of the environing community but a feasible improvement thereon in culture and skills would be the best means of achieving this objective of informal education in "general habits, attitudes and outlooks", which one unconsciously acquires from those around him. Community life so organised in a residential institution—from the basic to the university stage—would provide a boy or girl with "a fairly wide and rich range of common life, with associates of more than average intelligence, judgement and refinement".

The spirit of free, critical and objective enquiry would pervade every aspect of the life in the university and the development of this spirit would be the chief aim of education in the rural university. This would be the principal investment in research and the emphasis in the rural university would be on developing this spirit rather than on equipment. The subjects chosen for research would not be those in style but those relevant to important problems of the villages. Really, research of "a spirit and attitude of open minded inquiry" should infuse and guide thought and action from early childhood to old age. That would increase interest in life and have a revolutionary effect on the economy of living. That is the message of Nai Taleem restated.

The administration of the rural universities and its colleges would be in the hands of people who had been directly concerned with rural life and with rural education of the modern type with a substantial minority from entirely outside its field to contribute objective judgement and criticism. In the beginning rural education should maintain its independence of authority and direction until it was mature and could stand with self-assurance and a sense of equality, when it could be linked with the mainstream of education and be in a position to interact with it instead of being stifled by it. The university should be autonomous in regard to its syllabi, mode of evaluation etc. There should be no external examination. This was especially important at the pioneering stage when techniques were being worked out and developed.

While a new university might have independent beginnings it was best to base it on the foundations of a residential Rural Secondary School, the Commission recommended.

To establish the fullest possible co-operation between the various developmental agencies and the educational machinery it would be best to use the educational institutions as nodal points for the coordination of the efforts of the various development departments.

There would be very great gain if all these agencies could work through the rural educational institutions. The Secondary School Village or the campus of the Rural Secondary School, as already stated, might well become the local centre for all these services. In that way suitable housing and living condition would be provided, secretarial help, transportation etc., could be pooled, and local officials having business with some of the other agencies would find them all at one place. More important than these economies would be the fact that secondary school students would be in constant touch with these agencies. The nurses, librarians, agricultural agents and promoters of industry might share in the teaching and in the direction of practical work. Thus the residential secondary school village would become the educational and cultural centre of a group of villages.

Similarly, the Rural University could be the regional centre for all such rural service agencies. Rural workers and directors would profit by association with the Rural University, faculty members of the university would profit by constant contact with those directing field work, and university students in their part time work could assist rural workers and could themselves be under training for similar services. It would be a great loss to the country if the varied rural services were to develop without such coordination with rural education. The coordination suggested would call for some changes in the administrative machinery of the Central and State Governments. Also it would demand that those chosen for rural services should be competent and interested in rural life, chosen on merit only, and not political appointees. It would be tragic to have secondary school and university students living under the influence of mediocre rural social workers chosen for political reasons or by favouritism.

In order to implement the scheme of rural universities another committee was set up by the Ministry of Education which recommended the setting up of Rural Institute instead. The discussion of the Rural Institutes is beyond the scope of the present study.

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HIGHLIGHTS II

Technical Education

ELEVEN

THE GROWTH OF TECHNICAL EDUCATION

I

ROLE OF TECHNICAL EDUCATION

The Scientific Policy Resolution of 1958 emphasised that the key to national prosperity lay in the effective contribution of three factors: technology, raw materials and capital, of which the first was the most important. Hence the supreme importance to production of preparing those who would discover new technologies through research and those who would introduce them into production processes. Besides the importance to production, technical education is important for variegating educational processes to cater to those who, by natural aptitude, can best learn by doing, and thereby saving for the country and industry a large amount of talent, which would have been otherwise condemned to mediocrity and unemployment.

II

PRIOR TO 1937

Beginning of modern research

The well-established scientific and technological superiority of India was steadily eroded by political subjugation and the onslaught of cheap machine-made goods. The period of modern research began with the setting up of the three universities at Calcutta, Bombay and Madras in 1857, which produced a few top-ranking scientists like Acharya P.C. Ray, Prof. Meghnad Saha, Prof. S. N. Bose and others. Their pre-occupation, however, was mostly fundamental research.

Beginning with civil engineering

The foreign rulers wanted India to remain as agricultural country and a market for their industrial goods. So "the growth of Indian factories was non-existent before the 1850s and 1860s and painfully slow even thereafter".[1] Under the circumstances, they naturally did not encourage the development of indigenous technological capability and whatever industries there were depended on borrowed technology and even foreign technicians. The first steps towards the building up of India's technical manpower were taken when Government's schemes of irrigation, public works and railways demanded engineers. A "Chair of Civil Engineering" was sanctioned "in 1843-44 in connection with the Hindoo College"[2], but remained vacant as no professor was available. Such was the state of availability of technical manpower at that time! The Thomson College of Civil Engineering, Roorkee was put on a permanent footing in 1849 and became a model for technical and engineering education. The Wood's Despatch of 1854 emphasised the necessity of opening similar colleges elsewhere in India, "now that the system of railways and public work is (was) being rapidly extended". This was especially necessary "in the Presidency of Madras, where works of irrigation are (were) so essential, not only to the prosperity of the country, but to the very existence of the people in times of drought and scarcity". The Civil Engineering College at Madras was established only in 1858-59 (Director of Public Instruction's Report for the year) after the setting up of the Madras University in 1857. A "School of Ordnance Artificers" had, however, already been established in Madras in 1840.

Mining and electrical engineering

The *Indian Universities Commission* (1902)[3] developed the theme of technical education a step further. It was not in favour of the teaching of engineering at the university itself. For the engineering colleges turned out a large number of lower cadres and a small number only of the university level. They also recommended that students should preferably go for engineering after a degree in science. Alternatively the science courses required for engineering above the level of the Intermediate might be provided in the engineering college itself. Again, while they were in favour of laying down uniform standards for the engineering degrees in the various universities, they were not in favour of a common examination for all the universities. That, they thought, would not be feasible. They also, for the first time, widened the scope of engineering instruction, which had hitherto been confined almost solely to Civil Engineering, by recommending provision for instruction in Mining and Electrical Engineering. Further, they emphasised the need to keep training throughout practical in all the branches of engineering.

This diversification was due to the rapid development of railways and the mining industry in which Britain made heavy investments and from which it expected very rich returns:

> "Though railways comprised the single biggest item in British capital investment in India, much of the burden was shifted to the Indian tax-payers through the guaranteed interest system, by which the government paid a minimum dividend even if profits were non-existent. This had involved the payment of more than £50 million by 1900. The network was entirely geared to British commercial and strategic needs, and Indian businessmen often complained of discriminatory freight charges. Above all, the normal multiplier effects of railway investment were largely absent in colonial India. The bulk of railway equipment was imported from England and the development of ancillary engineering industries consequently remained very inadequate—only about 700 locomotives, for instance, were indigenously produced in the entire pre-Independence period. As late as

> 1921, only 10% of the superior posts were manned by Indians, so the diffusion of new skills remained limited while a substantial part of the income generated through railway investment leaked out abroad".[4]

The Indian technical personnel required and produced belonged mostly to the lower cadres. The higher expertise were mostly imported even by Indian industries. Bombay Textiles Mills, for example, "depended heavily on European technical expertise and entirely on imported machinery".[5] So there was no attempt to build up facilities for training higher level personnel. To the extent that they became inevitable, they were to be trained through overseas scholarships in Europe and America—a scheme to which the *1904 Resolution on Indian Education Policy* makes a reference.

Lower level training in India, advanced level abroad

The Resolution emphasised the need for industrialisation and preparing manpower therefor at the technical school level in India and the more advanced personnel abroad. Instruction in the technical school was to be preceded by "a preliminary general education of a simple and practical kind" in ordinary schools. These schools should aim at meeting the need of domestic rather than the export trade. The best of the product of these schools, selected with due regard to the needs of the type of industries needed, would be sent abroad under the scholarship scheme, so that when they came back they would be able to take "a leading part in the improvement of Indian industries".

Advanced level training in India encouraged

The *1913 Indian Educational Policy Resolution* contains an increased emphasis on technical education. Also there is a rethinking in regard to the overseas scholarship scheme for training of higher level personnel:

> "No branch of education at present evokes greater public interest than technical and industrial instruction. Consider-

> able progress has been made since 1904. Existing educational institutions have been overhauled and equipped for new courses. Scholarships tenable in Europe and America have been established. Thanks to the generosity of the Tata family, seconded by liberal financial aid from the Government of India and His Highness the Maharaja of Mysore, an Indian Institute of Science, designed upon a large scale, has been established in Bangalore; it was thrown open to pupils in 1911. The establishment of a Technological Institute at Cawnpore for the chemistry of sugar manufacture and leather, for textiles and for acids and alkalis, has been sanctioned. Industrial schools have been opened in several provinces. Altogether the number of technical schools has risen since 1904 from 88 to 218, and the number of pupils from 5,072 to 10,535".[6]

In regard to the overseas scholarship scheme, some doubts had arisen in regard to its efficacy for training senior personnel for Indian industries; and a Committee in England was examining the issue. For, the Policy Resolution said, "It is not always easy to arrange suitable courses of study; and study abroad puts the pupils at a disadvantage in removing them from the environment of Indian trade conditions". Another danger, which has become very great in the post-Independence period, had also emerged. "From the information available", the Resolution went on to say, it appears that, of 73 scholars sent abroad, 36 have not returned to India, while 18 are at present industrially employed in India."[7]

In regard to the lines of future development,[8] the Resolution said that it was to continue on existing lines. The Indian Institute of Science which provided for research in the application of new processes and the production of thoroughly trained managers, should be developed, as opportunity offered, and become eventually "a complete faculty of pure and applied science. The larger provincial institutions, attracting students from all-over India, and offering instruction in practical methods of management and supervision, should in the beginning concentrate on courses relevant to local industries. That would prevent duplication and make for economy. Later as industries develop and the demand for engineers and foremen increases, more and diversified courses could be provided. As regards the smaller institutions, art schools having an industrial bent, trade schools etc.,—they should always be tied up with the local industries. In regard to practical training, the Resolution stated: "It has been decided that while educational institutions should in no case trade on commercial lines, in certain cases instruction in industrial schools may be supplemented by practical training in workshops where the application of processes needs to be demonstrated. In certain cases, also, it will be necessary to purchase and maintain experimental plant for demonstrating the advantages of new machinery or new processes, and for ascertaining the data of production".

Technical education in universities

The *Calcutta University Commission* (1917-19) found a vicious circle in Bengal. Facilities for technical training of university level were very deficient—except Sibpur, there were no such facilities—on the one hand; on the other, there was a general prejudice against technical careers among university students. The Commission agreed with the prevailing view that provision of facilities for such training at the university would tend to remove the existing prejudice and recommended the provision of such courses in the university. Without keeping such an amendment of the existing situation "in the forefront", the Commission emphasised, "any scheme of educational reform must fall short of the country's needs".[9] But the courses should be closely related to the needs. Otherwise the whole movement towards practical careers might suffer. The second conidition was that no course should be started without a reasonable assurance that adequate provision would be available for qualified staff and equipment, which is expensive.

Survey and control of technical schools

The Auxiliary Committee appointed by the Indian Statutory Commission of 1929 to review the development of Education in India (*Hartog Committee*) in its brief reference[10] to technical education pointed out to the absence of an all-India review of industrial and technical education as well as to the divided control of technical and industrial schools. While they were with the Education Department in some provinces, in most provinces they were with the Industries Department, who did not always supply complete data to the Directors of Public Instruction for publication in their quinquennial review.

III

DEVELOPMENTS DURING 1937-51

On the eve

On the eve of the period under review the following features characterised the situation in regard to technical education:

(1) While it was the British policy to keep India an agricultural country and a market for its manufactured goods, certain forces were pushing India towards industrialisation: the pressure of the Indian commercial and industrial talent, as in the case of the Bombay textile industry; the anxiety of the British commercial interests in India to exploit India's mineral and other wealth; the need to open up the country through a network of railways for commercial and military purposes etc. The progress, however, was very very slow.

(2) Even the limited demand for technically trained people that this slow process of industrialisation threw up much of it was met by foreign expertise and technicians, leaving a still more limited demand to be met by Indian personnel. To meet this limited demand, technical education inched forward. So there was a slow but steady progress of technical education.

(3) The facilities created were mostly for training lower cadres though the need was experienced for creating facilities for training of higher cadres within the country itself, and a few significant beginnings were made in this direction.

(4) The spectrum of technical education was very small, in keeping with the very few industries that had come up.

(5) There was no clear and definite relationship established between technical education and general education. Nor was the role of technical education in achieving the basic aims of education recognised.

(6) On the other hand, it was being increasingly realised, due to the rapid spread of secondary education, that alternative occupational courses need to be provided to make secondary school products more employable and thereby reduce unemployment as well as the pressure on the universities.

Abbott-Wood report

To tackle the last question at the request of the Government of India, the Board of Education in England deputed two highly reputed experts—Messrs Abbott and Wood—to study the question of vocational education in India. Their "Report on Vocational Education in India" was submitted on 10th June, 1937. The report re-emphasised the need for coordination and co-operation between industry and commerce on the one hand and technical education on the other, already stressed by the Educational Policy Resolution of 1913 and the Calcutta University Commission (1917-19). The Report said: "Industry and Commerce must co-operate with educational organisations if the vocational education provided is to be appropriate and adequate. Organised co-operation of this kind does not yet exist in India".[11]

It, therefore, recommended: "Every province should make a survey of the educational needs of its industries and commerce and thus determine the types of vocational education to be provided, the stage to which each type should be carried and especially the number of recruits that can be absorbed annually. Until such a survey has been made it is impossible to do more than prepare an educational framework into which vocational schools and courses of instruction can be fitted".[12]

The second contribution of the Report was to indicate the precise relationship between general and technical education, which had not been done so far: "Vocational education is not on a lower plane than literary education, since the full purpose of education is to develop the whole powers of mind, body and spirit so that they may be devoted to the welfare of the society. . . . General and vocational education are not essentially different branches but the earlier and later phases of a continuous process. Each subject in the vocational school has its origin in a non-vocational school. . . . Vocational education is not a matter for the school alone since it is specific and not a general preparation for employment".[13] Other important recommendations of the Committee were:

1. If the progress of organised industry is not to displace the small scale worker, he must have the opportunity of adapting himself to changing conditions; and immediate steps to this end are necessary. Greater attention should, therefore, be paid to his training, and especially to his training in art where this is appropriate;
2. Effective machinery should be established for securing close and regular co-operation between industry and commerce, on the one hand, and education, on the other. This be secured by the establishment in each Province of a Government Advisory Council for Vocational Education, which should include the Director of Public Instruction, the Director of Industries, and two or three Principals of important vocational schools; on the side of business, it should include four or five businessmen selected by the Government on account of their knowledge and experience of particular branches of business. The Council should appoint Sub-Committees dealing respectively with education for (a) Engineering; (b) The Textile industries; (c) Other industries of major importance; (d) Small scale and cottage industries; (e) Agriculture; and (f) Commerce. The functions of Sub-Committees should be to draft curricula and syllabuses of instruction, to advise on equipment, to suggest where schools should be established, to visit the schools regularly, and generally to do all in their power to make their branch of vocational education successful;
3. Employers should help in the development of vocational education by providing buildings, equipment, materials and funds;

4. Vocational education should be of two main types. The Junior Technical Schools, receiving its pupils at the end of class VIII and providing a three years course, would be parallel to the Higher Secondary School, and should be held in the same repute. The Senior Vocational School, receiving its pupils at the end of Class XI and providing a two years course, would be parallel to the 'Intermediate College'. Although the Junior Technical Schools would lead either directly to employment or to further training in an Industrial School, a few of their pupils might wish to proceed to Senior Vocational Schools. In these instances, the 'leaving certificate' of the Junior Vocational School should be regarded as equivalent, for this purpose, to the certificate of matriculation;
5. Part-time schools should be provided for the further education of young men already in employment and if possible, the classes should be held in the day, the students being released by their employers for two half days a week in order that they might attend;
6. Pupils satisfactorily completing the course in vocational schools should be awarded leaving certificates; and these should testify, not only to the success obtained in the final examination, but also to the quality of the work done throughout the course. This involves keeping a record for each pupil showing (a) his percentage of attendance, and (b) his marks for work done in the classroom, the workshop, the laboratory, and at home throughout the whole of his course;
7. The type of Junior Vocational School which appears to be most necessary in India is the 'Junior Technical School' which gives a training (preliminary to employment in industries), suitable for boys who aim at becoming highly skilled artisans and foremen. The type of Senior Vocational School which appears to be most suitable is the 'Senior Technical School', which prepares its pupils for responsible posts in industries. Junior and Senior Technical Schools are appropriate in Industrial centres only and should not be established,

as a rule in areas with a population smaller than 50,000;

8. The spheres of influence of the existing schools of arts and crafts should be enlarged considerably; and other schools of arts and crafts working in close collaboration with them should be set up as opportunity serves;
9. The Government of India should establish on one site, (a) a Vocational Training College, (b) a Junior Technical School; (c) a Technical school attended by part-time as well as full-time industrial and commercial students and (d) a School of Arts and Crafts. Teachers in training at the Vocational Training College would use the technical and art schools as practising schools;
10. Provision should be made for giving vocational guidance to pupils; and
11. Government should publish a series of pamphlets describing careers for boys and the preliminary education needed for each career.[14]

The Report was a fuller document on vocational education than any so far produced. It placed it in proper perspective, within the framework of an over-all educational framework, giving it its due status, and linking it with appropriate stages of the existing educational system. Another linkage it established was with industry and commerce and the form of co-operation and help that they should give to vocational education. An appropriate machinery for organised co-operation was also suggested. The linkage with employment through vocational guidance and career pamphlets was also indicated. The Arts and Crafts were not forgotten. Nor was the worker in small-scale industry forgotten in the context of the prospect of an expanded organised large-scale industry. Taken as a whole it was the first important landmark in the history of development of technical education. Many of its recommendations have become a part of the working of the system of technical education in India. But before any action could be taken on the Report, the war broke out. The Report, however, remained an excellent draft to be adopted and improved upon by subsequent committees in the light of later developments.

Sargeant Report

The first such attempt was made by the Technical Education Committees of the Central Advisory Board in 1943, whose report was accepted later by the Board and published in its Report on "Post-War Educational Development in India" (1944). Two factors had altered the situation in regard to industrialisation and technical education required for meeting its manpower needs. Firstly, the war changed a position of extremely limited demand for technical manpower due to poor industrial growth into a position of large demand and poor supply. The war experience, when essential supplies could be cut off any moment by the enemy, made regional self-sufficiency a necessary condition for survival. Apart from the industries directly connected with the war, the situation stimulated industrialisation in general. After the war, schemes of Post-War Development created their own demand. This was, however, due only to the pressure of circumstances and not due to any liberal British policy. Sumit Sarkar says: "As during the First World War, Indian industrial development received a major stimulus from war demand, cutting off of imports, and forced reliance on indigenous products, even though the British still did their best to discourage Indian efforts (by Walchand Hirachand and Diwan Mirza Ismail of Mysore, for instance) to start production of automobiles, ships and aircraft".[15] The second factor was the publication of the Spense[16] Report (1939) and England's experience of Technical High Schools recommeded therein for their "cultural and vocational value". "The success, which experimental schools of this kind", says the Sargeant Report, "have already achieved in England in ensuring to Industry and Commerce their fair share of the best brains of the country, gives grounds for hope that they may satisfy in this country also a need which is already urgent and is likely to become more so in the post-war period, if present anticipations in regard to industrialisation are realised."[17]

Commenting on the existing limited supply of technically trained manpower, against the large anticipated demand in the post-war period, the Report ascribes it to limited openings, made still more limited by the practice of filling the more remunerative posts by imported technicians; and the aversion of middle and upper classes to industrial occupations, though this prejudice was steadily breaking down. Instruction itself had not escaped the over-academic atmosphere of Indian education. Nor had it been adequately linked with the actual conditions prevailing in workshops and factories.

In regard to the aim and content of technical education, the Report emphasised the dual role of technical education which had emerged in the West: "It must both form a link between education and industry and it must at the same time receive quite separate consideration as a form of mental training which is especially suited to certain types of intelligence, irrespective of their future occupations".[18] To respond to the needs of industries effectively, which is its primary function, technical education must take cognisance of the changes that had taken place in industry in the West, the impact of which would be increasingly felt in Indian industry. Industry had become more demanding because of accelerating competition as well as the increasing emergence of entirely new industries. It was also being increasingly realised that design and distribution should also be included in technical education so that the product was attractive to the consumer and passed on to him from the producer quickly and smoothly. Precision work, again, had acquired a new predominance. The accelerating pace of change in industry throws up an increasing number of new problems, "both human and material", which "call for more sympathy, more imagination and a deeper insight into the processes from those placed in positions of authority".[19] The research worker has not to think of "improvement along established lines only". He has also "to explore how a dying industry may be revived or a new one created". The modern methods of distribution and marketing were also very likely to make it possible for the small-business and cottage industry worker to survive the onslaught of large scale industry and so his training was also important for technical education. To meet these challenges "technical instruction today must be a wider and more liberal form of training than it has been in the past; it must comprehend the scientific principles underlying the processes of manufacture as well as the processes themselves; it must link up the sciences of production and business organisation with the arts of design and salesmanship. It must take cognisance of a social science in relation to the effect of industrial development on the life of a previously non-industrial community and it cannot even neglect the provision of purely cultural and recreational facilities as an antidote against mental and moral stagnation for those workers who are destined to remain the semi-skilled servants of the machine".[20]

In regard to the second function of technical education, that of an educational method for bringing out the best in body, mind and spirit, in the case of those with a practical bent of mind but not necessarily the less intelligent, the Report pointed out to its increasing recognition in the West. (Gandhiji had already demonstrated the superiority of practical subjects as tools of education in this country itself—not only for those practically oriented but for all). England's experience in this regard of Technical High Schools, recommended in the Spense Report, was especially significant. It also served to bring to industry some of the best brains, who would have been otherwise lost to mediocrity and unemployment for want of an appropriate educational method to bring out the best in them. When imparted in its broader sense, technical education had also the merit of bringing cultural benefits of higher education to those who were not able to go to the university for want of the necessary competence or due to adverse circumstances.

So far as organisation was concerned, the Report recommended an area-wise approach. The question of the courses to be taught, the type of institutions to be set up etc., should be decided after studying the industrial development of the area concerned and its needs. It may be decided to set up parallel institutions or have a central institution for higher levels with a large number of ancillary institutions. In regard to the controversial question of monotechnics vs. polytechnics, the Report recommended the polytechnics, except in certain special circumstances. A polytechnic would be more economical as the staff and workshop and laboratory facilities could be shared for a number of courses in regard to their overlapping areas. This is important. For equipment is costly and competent staff scarce. Students of different courses also gain by mutual interaction. The only exception where the monotechnic is to be preferred, says the Report, are "Where an industry is highly localised, or where its needs are so complicated or peculiar that it is difficult to satisfy them in the same building as those of other industries, or where the material to be dealt with, as for instance in training, makes it an uncomfortable neighbour".[21] The polytechnic was to have three types of facilities: (i) fulltime day school (Technical High School) for the boys of the normal high school-going age and their training would be devised on the assumption that they would rise ultimately to positions of responsibility; (ii) part-time classes for all classes of employees to improve their skills and competence; and (iii) full-time or part-time classes for more advanced students and research workers.

The Central Advisory Board stated: "In view of the prospective needs of post-war industry and commerce for skilled technicians, and in order to cater for the aptitude of those who will derive greater benefit from a practical course, the establishment of an efficient system of Technical Education at all stages, on the lines set out in the report of the Technical Education Committee, is a matter of great urgency".[22] The Committee had recommended the following institutions and courses to be provided therein:

> "(i) a two-year full-time course in Junior Technical or industrial or trade schools, to which pupils be admitted on leaving the Senior Basic (Middle) school at the age of about fourteen;
>
> (ii) a six-year full-time course in Technical High Schools, to which selected pupils will be admitted on completing the Primary (Junior Basic) stage at about the age of eleven. The first three years of the course will be mainly devoted to general subjects;
>
> (iii) a three-year full-time diploma course in Senior Technical Institutions, to which students will be admitted after passing the final examination of a Technical High School or an equivalent examination;
>
> (iv) a two-year full-time Advanced Diploma Course in Senior Technical Institutions, for those who have passed the above examination;

(v) a three-year part-time certificate course in Senior Technical Institutions, for students already in employment, and who possess the Technical High School Leaving Certificate or an equivalent certificate;

(vi) a two-year part-time Advanced Certificate course for those who have passed the above examination; and

(vii) classes in individual arts, crafts and other subjects related to Industry and Commerce for which there may be a sufficient demand".[23]

This institutional framework should be used as follows to train the various categories required for industry. The highest category will be that of the chief executives and research workers of the future. These will normally have after their preliminary training in a Technical High School and then pass on to the Technological Department of a University or to a full-time course of a National (Advanced) Diploma type in a Senior Technical Institution. In view of the importance of this small but most significant category, the persons involved should pass through a highly selective process. These Senior Techhical Institutions may or may not be affiliated to or connected with universities.

The next category, extremely important, is the supervisory category—the minor executives, foremen, charge hands etc.—who have to act as the link between the management and the operatives. They have to be sufficiently intelligent and knowledgeable to understand the instructions of the former and having sufficient power of expression to communicate and interpret these instructions to the latter. They also have to have sufficient experience and skill to command the respect of the workers. The Western countries have experienced considerable difficulty in recruiting the right type of men for this category. Mr. Abbott has, therefore, emphasised the necessity of concentrating on this category. "It is the main aim", says the Sargeant Report, "of the Technical High School to satisfy this need but the Technical High School pupil on completing the course there will need to continue his technical education either by taking National Diploma or Certificate course or by attending part-time classes of a fairly advanced description".[24]

The third category comprises of skilled craftsmen, most of whom will not aspire to executive positions. These could be recruited from Technical High School but preferably from among those who, after passing the Senior Basic (Middle) School, where they would have mastered the rudiments of craftwork, had taken a full-time two or three year course in a Junior Technical, or Trade or Industrial School. Facilities should be Provided for them to continue their general education after they join employment.

Below these three categories are the great mass of semi-skilled or unskilled labour. These will be recruited generally from the Senior Basic (Middle) school leavers, where they would have done craft work. The Report underlines the importance of this knowledge and skill: "The fact must not be overlooked that boys and girls who have passed through the basic schools will be much better prepared to enter industrial occupations than most of those who now leave Primary and Middle Schools. They should at least know something of the use of tools and the properties of woods and metals".[25] They should, however be offered facilities for improving their general education as well as their technical skill so that the best of them, could rise to the status of skilled workers.

The CABE further emphasised the need for practical orientation of research. The research in Technological Departments of universities should be directed towards the solution of practical problems, and results of laboratory research should be tested on a commercial scale. The university degrees, moreover, should become practical and the students should spend a considerable part of their time throughout the course in workshops and factories. They also recommended that as many students as possible should have the opportunity of studying abroad and having first-hand experience of foreign industrial and business methods.

They also stressed the importance of part-time education for upgrading the quality of employed manpower and strongly recommended the system of day release, which had special advantages as it avoided fatigue among the students, secured the interest of employers who paid for it and thus were keen to get out of it the maximum benefit. The system of part-time instruction, whether in the evenings or during the day, brings to bear upon the instruction imparted the criticism of students who have had first-hand experience of conditions in industry. The Board have specially underlined in this connection the importance of sandwich courses where the employee divides the year between the works and attendance at a technical institute. This system of training would correct the over-academic character of technical education in India where "a student may spend several years under instruction without obtaining any first-hand experience of actual factory conditions".[26] The Board recommend the largest provision possible for part-time education. They say: "They provision of such (part-time) facilities in other countries had proved so remunerative in the widest sense that it is justifiable to lay down the general rule that where any reasonable demand arises every effort should be made to satisfy it".[27]

The teacher and his training in teaching methods in technical and commercial institutions is as important as in general education. It is even more difficult to get these teachers because of the competition from Industry and Commerce. To secure an adequate supply in these circumstances, the Board recommended suitable scales of pay. In regard to their training, the Board said that the technical or commercial teacher should have had first-hand experience of industry or commerce before being sent for training. They have also stated the desirability of the teachers having studied abroad and having had first hand experience of foreign methods in industry and commerce.

As regards the location, organisation, control and financing of technical education, the Board accepted the following recommendations of its Technical Education Committee:

(1) Technical institutions should be located in or near industrial areas, but students from other areas should have an equal opportunity of admission to these institutions. To ensure this it is necessary that technical education should be organised on an all-India basis.

(2) Technical High Schools and Junior Technical, Trade or Industrial Schools should be administered by Provincial Governments but all technical education beyond this stage, other than that given in the technological departments of universities, should be placed under a

central controlling body which will have on it representatives of all the interests concerned. This body should be set up as soon as possible. (The name of this body which was set up in 1945 became the All India Council for Technical Education).

(3) The formation of the APTI (I) is a most welcome step in the direction of coordinating technical instruction in the country. It should be given adequate representation on the central controlling body.

(4) It is essential that subject to the recommendation at (2) above the administration of all technical education should be under the Education Department of the Central or Provincial Government or State, as the case may be. There should be a separate inspectorial staff for this purpose. The Education Department should maintain close contact with the other departments concerned with Industry and Commerce.

(5) As a corollary to technical education in its higher stages being administered by a central body, the financial responsibility will have to be accepted by the Central Government.[28]

The Board's recommendations in regard to technical education applied generally to commercial education as well except that the categories of personnel required could be reduced to two: (a) those who will transact business on an important scale or perform professional functions such as banking, accountancy etc., and (b) those who will be engaged in recording the transactions of group (a). The former requires training in imagination, initiative, administration and leadership apart from professional training. The latter would, however, require training in the office arts, e.g., short-hand, typing, book-keeping etc., as well as in alertness, accuracy and a sense of responsibility. The Board also referred to the neglect of art education noted by Mr. Abbott and agreed with him about giving due attention to the artistic quality of goods produced.

All India Council of Technical Education

So a blue print for a national system of technical education—except agricultural education—had already been prepared by 1944. Hereafter, there were hardly any alternations—only minor modifications or elaborations.

Close on the heels of the Sargeant Report came the implementation of its recommendation in regard to the setting up of a Central body to control and coordinate technical education. The All-India Council of Technical Education was set up by the Central Government in 1945 to advise it on the organisation, planning and coordination of higher technical education in India. It would survey the field of technical education, consider new proposals for its development, and coordinate all available resources in developing technical education on an all-India basis in close relationship with the existing and emerging demand for engineering and technological personnel. The Council is assisted by six All-India Boards of Technical Studies—one each for Applied Art, Architecture and Regional Planning, Engineering and Metallurgy, Chemical Engineering and Chemical Technology, Commerce and Business Administration, and Textile Technology. The Boards have prepared National Diploma courses of a very high standard, differing from university degrees in their largely practical orientation.

Sarkar Committee

The next major step towards the development of technical education in India was the appointment of the Sarkar Committee to study the question of the development of higher technical education in India. The Committee made the following recommendations in its interim report submitted in 1946:

"(i) Not less than four Higher Technical Institutions—one in the North, one in the East, one in the South and one in the West—will be necessary to satisfy the post-war requirements.

(ii) The one in the East should be set up in or near Calcutta at an early date.

(iii) Establishment of the Western Institution which should be in or near Bombay should be taken in hand concurrently with the Eastern Institution or failing that as soon after as possible.

(iv) To satisfy the immediate needs for Engineering-generally and for those with specialised training in Hydraulics in particular, the engineering nucleus of the Northern Institution should be set up without delay.

(v) To ensure the proper planning of buildings, equipment and courses of study, the Principal and Heads of the main departments of these institutions should be appointed and the services of an architect with experience in the planning of technical institutions secured at a sufficiently early stage".[29]

The Sarkar Committee, however, recommended that before taking final decisions in regard to the development of higher technical education in the country as a whole a proper survey and thorough examination of the existing facilities must be made.

Indian Universities Commission (1948-49)

The Indian Universities Commission (1948-49) made two significant contributions to the development of technical education. Firstly, that in spite of a rapid growth during 1936-47, which was more rapid than in any other preceding decade, there was a considerable gap between the supply of engineers and technologists and India's immediate needs, leave alone the supply of such personnel in India in comparison to other developed countries:

> "We shall be producing 1,130 engineering graduates each year, and within the next 5 years nearly 6000 graduates with B. E. degrees . . . the American output . . . is nearly 17 times as large as that of Great Britain and 40 times that of India. . . . The need of the country is estimated to be nearly 27,000 (this includes Engineers, Architects, Metallurgists and Chemical Technologists) in 5-10 years, depending upon the speed of the constructive works undertaken.

> So the yearly demand varies from 5,400 to 2,700 per year. The outturn of Indian colleges is expected to be 1,130 per year. So the prospective supply falls far below the demand".[30]

The more important contribution was the recommendation for setting up new types of engineering and technological institutions. The Commission said: "India needs more engineering schools. However, our greatest need is not for more like those we have . . . . In any new engineering schools there is one principle which may apply universally. The aim should be to produce, not merely men skilled in technology, but also sound well-integrated individuals, and citizens. Therefore, the element of general education should not be overlooked. Also, in most engineering courses, the underlying scientific and engineering studies will be common to nearly all fields. Thus, perhaps a half of the entire programme for students may be almost the same irrespective of the special field to be covered".[31]

Engineering being largely a product of discoveries in the basic sciences, the Commission felt that engineering colleges would flourish best side by side with research in them in the universities. The new concept of technical education as given above would also be more easily realised if engineering colleges are located in the universities, where they can interact with the other disciplines.

To improve the quality of and give new directions to existing institutions as well as to open new colleges the Commission made the following further recommendations:

> "(1) that the existing engineering and technological institutes of the country, whatever be their origin or method of administration, should be regarded as national assets, and steps should be taken to improve their usefulness according to the recommendations of the Advisory Panel of Engineers and Technologists to be set up;
>
> (2) the number of engineering schools of different grades be increased particularly for training of foremen, craftsmen, draftmen, overseers, etc;

(3) the engineering schools cover a large number of fields and branches of engineering to meet the increasingly varied needs of the country. If there is unemployment among competent engineers, it is because too many are trained in some phases of engineering and too few in others;

(4) the engineering courses of study include general education and basic physical and engineering sciences, probably fewer applied courses, and towards the end of the course specialisation in some specific field. The first year or more of each course should in general be common to all branches of engineering;

(5) that, as effective engineering education requires works practice along with academic study, this be secured as work during vacation or as post-graduate works training, or as participation in work and study programme during the under-graduate years;

(6) that wherever possible the existing engineering colleges be upgraded to post-graduate training and research in selected subjects. This requires a class of teachers with different upbringing habits and service conditions than the present staff, hence it may not always be possible to upgrade the present institutes;

(7) that steps should be taken to start without delay the higher technological institutes as recommended by the Higher Technological Education Committee, for training much needed engineer-scientists and design and development engineers;

(8) that enquiries be made of possibilities for training for graduate engineers and engineer scientists as employees in American industries and other institutions, so that practical 'know-how' may be quickly secured for India's industries;

(9) that in establishing new engineering colleges or institutes there be fresh, critical enquiry as to the types of engineering service needed in India. Uncritical repetition and immitation of the existing institutions here and abroad should be avoided. Especially consideration should be given to training which will prepare students to become competent and self-reliant, who

will have the initiative and courage to start new industries, even if on a very small scale, to the end that there shall be many sources of initiative and responsibility in India, and that a top-heavy economic bureaucracy may not be necessary;

(10) that engineering colleges be not controlled or dominated in their administration by ministries or other government departments. They should be closely associated with universities and appointments should be made . . . with the approval and active participation of the university administration, where the relationship makes that desirable;

(11) that Faculties of Engineering be called 'Faculties of Engineering and Technology' and should include teachers representing different branches of engineering and technology, a few scientists, teachers of humanities and commerce, and a number of practising engineers and technologists;

(12) that the proposed Central Universities Grants Commission be helped by a Standing Advisory Panel for Engineering and Technology as the fulfilment of the programme of Engineering and Technical Education, as visualised by us, will require large grants from the Centre".[32]

Constitution and Technical Education

26th January 1950 was perhaps the biggest day for technical education, when its importance was enshrined in the Constitution of India. The Parliament was given "exclusive power" to make laws in respect of "Institutions for scientific . . . technical education financed by the Government of India wholly or in part or declared by Parliament by Law to be institutions of national importance"[33] and for "union agencies and institutions for (a) professional, vocational and technical training . . . ; (b) the promotion of special studies or research . . ."[34] Item 66 of the Union List empowers the Parliament to make laws relating to "Coordination and determination of standards in institutions of higher education or research and scientific and technical institutions".[35]

The First Five Year Plan

The stage soon arrived when the cumulative experience, and insights embodied in the recommendations of the various Committees and Commissions were to be synthesised and translated into a plan of action for the Central and State Governments in coordination with similar plans of the consumers of technical manpower. That was when the First Five Year Plan of the country was formulated.[36]

Reviewing the position on the eve of the Plan, the Planning Commission found that while there had been considerable expansion at the degree and diploma levels to train the executive and supervisory cadres, facilities for post-graduate and research to prepare R&D men on the one hand and for training craftsmen on the other were very inadequate. Similarly inadequate were facilities for the training of teachers and instructors and of retrenched personnel for alternative employment. Even at the under-graduate and diploma levels expansion had not been accompanied by increase in physical facilities and the need was for consolidation, awaiting the study of the demand and supply position in regard to degree and diploma holders. Moreover, most of the expansion at these levels had "taken place in the basic courses and specialised courses had not received sufficient attention".[37] There were then more fundamental questions of the pattern of technical education, the apportioning of responsibility between different agencies, the control, co-operation with industry etc. Various bodies which had examined these questions had made recommendations. These had now to be sifted, synthesised and established as current practice. The expansion at the degree and diploma levels was as is depicted in tabular form on the succeeding page.[38]

As regards the pattern, the Commission endorsed the recommendation of the Joint Committee of the All India Council for Technical Education and the Inter-University Board that the Master's degree be awarded after graduation followed by "disciplined training which may include a certain amount of research."[39] The first degree course should be a four years' course after Intermediate Science, and including six months' practical training. In technology the first degree should be awarded after a four years' course following Intermediate

Year	Engineering		Technology	
	Output	Intake	Output	Intake
Degree Courses				
1947	950	2,520	320	420
1950	1,652	3,297	795	1,156
1951	2,152	3,755	675	1,338
Diploma Courses				
1947	1,150	3,150	290	500
1950	1,864	4,400	689	1,212
1951	1,923	4,965	885	1,523

Science or a two years' course after B.Sc. It was important, said the Commission, that a uniform pattern should replace the present chaotic position. In Technology there were wide variations in regard to the duration and content of both graduate and post-graduate awards. In regard to engineering latter question did not arise at the moment. For besides a few courses at the Indian Institute of Science, Bangalore, and the Indian Institute of Technology, Kharagpur, there were hardly any facilities for post-graduate education.

The two defects at the degree and diploma levels were the absence of continuing education on a part-time basis for those in employment and insufficient emphasis on the practical side of training.

For the training of engineering supervisory personnel the Commission recommended the universal adoption of the National Certificate Course on a part-time or a full time basis.

At the craftsman level the need was for standardisation of both training and testing for which the Government of India had already appointed the National Trades Certification Investigation Committee. It was also necessary to open rural training centres each at the centre of a group of villages to improve the techniques and skills of villagers.

The Commission also underlined the urgent need for establishing a large number of Technical High Schools recommended by the All-India Council of Technical Education. These should be opened, wherever possible, in close conjunction with basic institutions.

In regard to the apportionment of responsibility within the directions indicated by the Constitution, the Commission recommended that in view of its cost and importance research, advanced work and post-graduate courses should be the responsibility of the Central Government with such assistance as was available from the State Governments, commerce and industry. As regards undergraduate work, the major responsibility should be that of the State Government concerned with such financial assistance as might be given by the Central Government for maintenance of standards and provision of new approved courses. Responsibility for diploma/certificate courses for training supervisory personnel should be shared by the State Governments and the Central Government in the proportion agreed upon in each case. That for courses in junior technical institutions, industrial schools, trade schools etc., should be shouldered by the State Governments with the assistance of industry. Responsibility for secondary education with technical bias should be shouldered by the State Governments themselves. That for training of industrial workers or apprentices under proper supervision should be shared by the Central and State Governments with the assistance of industry. In regard to the training of technical teachers and instructors, the responsibility of the Central Government will be in accordance with the responsibilities undertaken for the various levels of training for which teachers are being trained.

As regards coordination, the Government of India had already set up the All-India Council of Technical Education. The Council of Scientific and Industrial Research had set up an Engineering Research Board, whose activities, the Commission felt, would soon extend to engineering colleges as well. They, therefore, recommended that there should be perfect coordination between the two bodies. Further, the All India Council of Technical Education had decided to set up four Regional Committees in the four regions of the country. Of these two had already been established and the remaining two were to be set up soon. The function of these Regional Committees was to look after the problems of technical education and those of its liaison with those of industry and commerce in the different regions. The work of coordination within the regions was the function of these committees. In view of the available mechanism of the Council with its Regional Committees, the Commission recommended that a convention should be established that the Council's advice was sought and heeded in the case of the new projects proposed and in those cases where substantial extension in existing projects was contemplated.

In regard to the obvious necessity of very close co-operation between industry and commerce on the one hand and technical institutions on the other the Planning Commission recommended that together they should develop courses at the postgraduate level. These could be "Company operated courses" "for giving the new employees, in addition to works experience, some form of orientation training to acquaint them with their surroundings, the organisation of the companies, their purposes and policies and, above all, to show them the paths of opportunities that are available to them."[40] Organisation of "college extension courses" for the employees of industry is another variety of co-operation possible, where colleges organise out-of-hours courses for ambitious industrial employees. "Postgraduate college courses" can be organised for employees on leave. "Indian industry," say the Commission, "can certainly accomplish the task of training top-grade scientists by returning to the universities and colleges a few men each year for independent study."[41] These men returning in their mature years would pursue their own research objectives developed from their research experience. They would not work for any degree but they would sometimes teach if they felt so inclined. Industry could help by providing fellowships to such of its employees who undertake such study. Industry could organise conferences where professors and readers could interact with those engaged in industry. Similarly lectures by industrial leaders should also be stimulating. Industrial problems could be studied in colleges and industrial institutions with very close co-operation between industries and institutions. Men in industry could be given representation on college governing bodies. Further, the Commission felt that the "presence of various interests in each region on the regional committee of the All-India Council for Technical Education should assist in bringing about greater co-operation between industry and educational institutions."[42]

In regard to the lines of future development, the Commission felt that a suitable machinery should be established to assess the present employment position and the future needs for technical manpower indicated by development plans of the different sectors. Yet the supply planned should be somewhat in excess of these estimates so that through the initiative of this extra manpower new ideas are developed and new small-scale ventures promoted. To keep appropriate balance between demand and supply of technical manpower, it would be useful for institutions of technical education to keep proper records of their alumni and the work that they do after passing out. That would give an idea of the utility of the courses provided and the planning of the number required to be trained.

Development of research and post-graduate facilities should receive special attention. As many post-graduate courses as possible should be developed at the Indian Institute of Technology, Kharagpur, and the Indian Institute of Science, Bangalore. Advanced work and research should also be concentrated there. Other institutions which have built up strong undergraduate sections should also be encouraged to develop post-graduate courses. Collaboration between research work in institutions of technical education on the one hand and National Laboratories and Central research institutions on the other should also strengthen research. Integrated schemes to exploit fully the facilities available at the various institutions should also be worked out.

So far as under-graduate courses were concerned the need was for providing courses in special subjects such as technical training in printing, processing of woolen and silk fabrics, etc. Equally urgent was the need for expanding training facilities in architecture and town planning. While the main responsibility for the improvement of non-government institutions was that of industry and commerce, the Central and State Governments had also a responsibility of ensuring quality in these institutions, if it was decided, after a proper survey, that they should be allowed to continue. To enable the State Governments to discharge this additional responsibility, the Central Government should assume partial responsibility also for institutions hitherto wholly financed by the State Governments.

Training of supervisory personnel needed special emphasis. They should be prepared through the National Certificate Courses of the All India Council of Technical Education at some of the existing institutions after a proper orientation of their activities. These courses should be organised mostly on a part-time basis.

"The greatest need," however, said the Commission, was "for expansion of training facilities at the level of artisans and craftsmen."[43] There should be a very widespread attempt to upgrade the skills of people engaged in production through large expansion of institutions run by the Ministry of Labour, trade schools, industrial schools, production-cum-training centres etc. Rural training centres should be established. In towns institutions and industries should co-operate for training of industrial employees. Training of varying standards would have to be organised for such persons. Apprenticeship training schemes in industries should be expanded as an important activity. It should be properly supervised and coordinated with training in technical institutions. "We hope," said the Commission, "that the Regional Committees of the All-India Council of Technical Education will consider the task as of the greatest urgency and importance."[44]

The meagre facilities for refresher courses needed considerable, expansion, especially in areas of industrial concentration. The regional committees should study the problem in each region and organise, on a part-time or full-time basis, short-term courses in various subjects, in collaboration with industrial and technical establishments on the one hand and technical education institutions on the other. While the industrial and technical establishments as the prime beneficiaries of these courses should normally bear the financial liability of running these courses Government may render some assistance for encouraging this laudable activity.

There was only one institution for training of technical teachers at Koni Bilaspur run by the Ministry of Labour. The Commission did not ascribe to the view that technical teachers did not require any training in teaching methods.

Education for commerce and management is now rightly regarded on an integral part of technical education. A comprehensive examination of the state of commercial education in the country and a proper survey of the facilities available at various levels was badly needed. To remedy the prevailing chaotic state of the duration and standard of various courses the Commission recommended the universal adoption of the national diploma and certificate courses designed by the All India Council for Technical Education and its Board of Technical Studies in Commerce and Business Administration for the training of different categories of personnel for commercial occupations.

Increase in the efficiency of production and distribution processes requires specially trained management personnel "at all levels and in all fields." The importance of this is emphasised by the Percy Committee of the U.K., for instance, as follows: "The highly trained technician is often ignorant of the principles of industrial organisation and management and he often shows no inclination to accept administrative responsibility. Admittedly, there is much that can be learnt in this field only from experience, but there is a body of knowledge, the awareness of which may greatly facilitate the process of learning. This body of knowledge should be made available both at the under-graduate and the post-graduate stages."[45] The All India Council for Technical Education has constituted a committee on industrial administration and business management to study the question of detecting aptitude for management work and designing appropriate education and training courses to develop it. This committee had already prepared a plan for introducing full-time specialised courses on industrial administration and business management in the eastern region and was engaged then on preparing a plan for the Western region. The Commission recommended that the work be expedited and management studies on a regional basis be organised throughout the country.

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31. *Ibid.*, p. 244 (Delhi, 1950).
32. *Ibid.*, pp. 255-56.
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34. *Ibid.*, Item 65 of the Union List, p. 263.
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36. The plan came into operation on the 1st of April 1951, though the full Report on it came out only in 1952.
37. *The First Five Year Plan*, Government of India, Planning Commission, p. 549.
38. *Ibid.*
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HIGHLIGHTS III

University Education

TWELVE

THE UNIVERSITY EDUCATION COMMISSION REPORT—ITS SIGNIFICANCE

I

INTRODUCTION

The Report of the University Education Commission, also known as the Radhakrishnan Commission, is the most important report on education of the period under review. Although its scope is narrower than that of the CABE Report on Post-War Educational Development in India (1944), its depth is much greater, its perspective much larger and the times when it was written were reverberating with change. "Great as were the changes that had taken place in the political and economic conditions of Indian society in the years that preceded the transfer of power on August 15, 1947, considerable as was the progress in education during that period, they are less great than the changes that have been crowded into these few months of freedom. The academic problem has assumed new shapes".[1] The Commission, again, had the unique distinction of being the first to be appointed after the advent of Independence, though its Report was the second to be presented to the Government of independent India, being preceded by about two months by that of the Scientific Manpower Committee, set up just before Independence in April 1947. So the Commission had the opportunity of taking advantage of and reacting to the findings of this Committee. The Commission's theme, however, was much more comprehensive and its perspective much larger.

II

THE BASIC LIMITATIONS

Approaching from the wrong end

The Report is a brilliant document but before that aspect of it is examined, it is better to define its two basic limitations, for which those who set it up were responsible and not the Commission. Firstly, the Commission was prematurely appointed with the result that we began rebuilding the education pyramid from the wrong end. Even if one concedes that Gandhiji had put before the country his scheme of basic education and the country had accepted it, with certain modifications, as the pattern of elementary education, the secondary education—described by the Commission itself as "the weakest link in our educational machinery" required prior attention. The Abbott-Wood and the Sargeant Reports were too inadequate a response to the challenge of secondary education. The result of this topsy-turvy approach has been that the evil of university education dictating the nature of secondary education, and that of secondary education dictating that of primary education, instead of vice versa, has continued to this day and made the growth of a rational educational pyramid impossible. It was largely responsible for the failure of basic and post-basic education. In refreshing contrast was Gandhiji's approach, discussed in earlier chapters. In this regard what Gandhiji said, when advising against the hasty foundation of new universities, is relevant. He wanted them to wait "till India has digested the newly acquired freedom". For "where administration has been in foreign hands, whatever comes to the people comes from the top and thus they become more and more dependent. Where it is based on popular will, everything goes from bottom upward and hence it lasts. . . .Universities founded under foreign domination have run in the reverse direction".[2] The university trained intellectuals and bureaucrats trained in the foreign way could not sufficiently realise the necessity of keeping firm hold of the impulses from below so that when they reached the top these impulses still retained the vitality to shape their policies.

Speculating about the reason for this approach, one finds a possible explanation in Pandit Nehru's declaration "that if all was well with the universities, all would be well with the Nation".[3] That would not be psychologically correct. For by the time a student reaches the university his attitudes and behavioural patterns are set and one can do very little about them. Perhaps Pandit Nehru was not thinking of the university as a distinct stage of education but as education as a whole. And it would be true that if the educational system was correct the rest would take care of itself. Or was it that Pandit Nehru meant what he said? Our leaders were so forcefully confronted with the evils of university education—unemployment, unemployability, overcrowding, inadequate physical facilities etc.—that they confused the tip of the ice-berg with the ice-berg itself and felt that they could and should immediately attend to the end product of the education system. On a superficial view one could justify such a stand. Independent India needed leaders at various levels in all directions with the requisite attitudes and competencies and this result could be obtained best by immediate attention to the universities. If the universities produced the right type of teachers they would set right the earlier stages in due course. But unfortunately there are no short-cuts to education. Probably the choice of the leaders was instinctive and the result of the tradition of building from the top downwards, which is the hierarchical and feudal heritage of mankind. Mankind is slow to learn that democracy requires the elite to go down to the bottom and generate impulses from below—from the needs, capacities and resources of the mass of the people—and to build the superstructure, layer by layer, in response to the compulsion of those impulses. In his famous Minute of 1823, Mountstuart Elphinstone had said: "I conceive it is more important to impart a high degree of education to the upper classes than to diffuse a much lower sort of it among the common people. The most important branch of education is that designed to prepare natives for public employment". It was a wise policy for colonial rulers, who were interested in a limited supply of clerical personnel, to concentrate limited investment on a small group at the top, which could be moulded with care in a short span of time in certain basic competencies and loyalties as "partners in development"—a manageable and highly fruitful task. It would not suit a democracy where the whole mass has to arise and demand the fulfilment of its many needs. One plausible reason, however, could have been the mounting pressure for new universities. Whereas between 1926-46, only 6 universities were added, 7 new universities were added during 1947-49 itself. The Government could have been influenced by the need to have some criteria given by expert opinion to sort out discriminatingly the various requests. To this Gandhiji's reply had been to wait till we had "digested our freedom", till the lifeless framework of the Constitution had been made alive and set pulsating by translating its broad directions into policies and programmes calculated to meet the real needs of the people at the base by careful planning and programming, which would send up messages for the nature of the super structure.

Lack of perspective

This brings us to the second overall weakness of the Report. The task of planning for university education was prematurely undertaken before the socio-economic and political reality had crystallized itself and its educational imperatives had become clear. So the Report lacks in the main the perspective of university education as the coping stone of an education system designed to meet the challenges of the over-all development of the country. The University Education Commission, said Arthur Morgan, made a study of university education only within the framework of university education and so did not do justice to the real needs of India. "To reach a judgement as to the major overall needs of India and of the suitability of the present University education system to meet those needs", they should have viewed the system "from outside itself, as part of the whole life of India".[4] We have a glimpse of a belated awareness of this in the last chapter of the Report—as the vermiform appendix, but perhaps its most valuable part. So the Report can be divided into two parts, the main Report tinkering with the existing system but largely leaving it intact, and its bold, brilliant, but limited initiatives in regard to Professional Education and Rural Universities. The existing system had been condemned by all concerned for its unsuitability to meet the existing needs of India, even to the extent that they had crystallized—its foreign roots (even while the model itself had changed its form), its urban character in a predominantly rural country, its methodology encouraging passive receptivity in a democratic society requiring small initiatives at millions of points, its elitist character even within its urban orientation etc. It was a system needing a radical change, not a reform here and there. In implementation, the new directions it indicated were forgotten. They needed planned, hard work and men of understanding and imagination. So the net effect was only to give a new lease of life to the existing system, with minor modifications.

III

THE POSITIVE SIDE: GENERAL FEATURES

Within these overall limitations, it is a brilliant Report. Before coming to individual and specific recommendations, certain general features of the positive side of the Report may be noted.

Historical retrospect

The first factor which gives the Report its uniqueness is its position in time. As a result, it had not only a wider canvas to work on than the Indian University Commission of 1902 and the Calcutta University Commission (1917-19), but also had the problems of university education emerge much more clearly. It had also had the advantage of the insights of the earlier Commissions and the donouement of their recommendations. In its brief but lucid survey of past developments the following points emerge:

(1) While the modern universities did not owe any thing to the ancient and medieval centres of learning the latter had much in them to inspire respect.

(2) The British policy changed by stages from support to oriental learning to indifference and, at times antagonism in favour of the English language and European litera-

ture and science. The motives of different policy makers varied and in this connection one must distinguish between good motives and bad insights on that one hand and bad motives on the other. Macaulay's case would illustrate. His ignorance is only matched by his racial arrogance in his oft-quoted and famous Minute where he said that he had not met a single orientalist "who could deny that a single shelf of a good European Library was worth the whole literature of India and Arabia".[5] And yet nobody could accuse him of ill-feelings towards India. For it was the same Macaulay who had said in Parliament: "Are we to keep the people of India ignorant in order that we may keep them submissive? Or do we think we can give knowledge without awakening ambition? Or do we mean to awaken ambition and to provide it with no legitimate vent?. . . It may be that the public mind of India may expand under our system until it has outgrown that system, that by good government we may educate our subjects into a capacity for better government, that having become instructed in European knowledge, they may, in same future age, demand European institutions. Whether such a day will ever come I know not. Whenever it comes, it will be the proudest day in English History. . . . The sceptre may pass away from us. Victory may be inconstant to our arms. But there are triumphs which are followed by no reverse. There is an empire exempt from all natural causes of decay. These triumphs are the pacific triumphs of reason over barbarism: that empire is the imperishable empire of our arts and our morals, our literature and our laws".[6]

(3) The imposition of English on the people was "Imposition with consent". In 1844, a Government Resolution enjoined that for public employment in every case preference would be given to those who had been educated in western science and were familiar with the English language. Government funds were to be devoted solely to the imparting of English language. So the demand for English grew. The thinking of the Indians was also coloured, so that "one of the greatest Indians of the

Century", Raja Rammohan Roy, vigorously opposed the proposal to found a Sanskrit College at Calcutta as he did not want his young contemporaries to acquire "the vain and empty subtleties" of "speculative men".[7]

(4) Those who imitate do not have the dynamism even to follow the original model as it develops further. Our universities began as affiliating universities after the pattern of the London University, and we stuck on to our handicap even when London abandoned its original character "and substituted for it constituent colleges and a system of open examination without regard to the candidate's place of examination".[8]

(5) The Calcutta University Commission Report had noted "a general disregard among university students of Bengal of finding careers" in practical professions. This was due to the lack of opportunities due to slow industrial growth and the practice of importing technical experts from outside, noted in the previous chapter, and not due to any prejudice against these professions or such training. For example, when the National Council of Education in Bengal, in protest against the Partition of Bengal, set up national institutions, independent of Government, it was the College of Technology that flourished and has developed into an excellent institution, while the college of Arts and Science languished after the first flush of enthusiasm.[9]

(6) There was considerable growth of university education by the time the Commission reported in 1949, compared to 1902 and 1919, when the Indian Universities Commission and the Calcutta University Commission respectively reported. Whereas in 1902 there were only five universities, in 1919 there were 9, and by 1949 there were 25 (excluding Dacca and West Punjab Universities which had gone to Pakistan). The second feature was the movement towards teaching instead of affiliating universities. Thirdly, there was progressive increase in the elected component of the Senate.

Its Indianness

Another characteristic, which distinguishes the 1949 Commission's work from that of the earlier Commissions is its Indianness. Being set up after Independence, the whole atmosphere in which it operated was Indian in contrast to the colonial atmosphere of the earlier Commissions. So was its composition predominantly Indian instead of British as in the case of the earlier two Commissions. In 1902 the Chairman was British and so were 6 of the other eight permanent members. Of the two Indian members one was "The Honourable Syed Hussain Bilgrami, Nawab Imad-ul-Mulk Bahadur, B.A.". The second Indian, the Honourable Mr. Gooroo Dass Banerjee, M.A., D.L., wrote a long minute of dissent, differing with the Commission on a very large number of their recommendations. The 1919 Commission was headed by Sadler and out of the 5 other members 3 were British. The 1949 Commission was not only headed by one of the greatest Indian intellectuals of modern times, who had drunk deep at the fount of Indian culture, of the other 9 members also, only three were foreigners—two Americans and one British. Of the two Americans, Dr. Morgan had the rich American experience, which he knew how to adapt to Indian conditions and had been deeply influenced by Gandhiji's system of education; and it is this adaptation that is responsible for perhaps the most brilliant chapter in the Report—that on Rural Universities. Dr. Zakir Hussain and Morgan ensured that Gandhiji's valuable experiments were fully taken advantage of, within the over-all limitations mentioned earlier.

Again, everywhere the attempt is to strike our roots in the Indian tradition and to see the present and the future in the perspective of the past—whether it is the concept of education or its practices or anything else. There is recognition and bold assertion of the Indian identity in refreshing contrast to the attitude of denigration or indifference in the Reports of the earlier period. Every occasion is taken advantage of to take legitimate pride in India's heritage, not be rest upon it, but to receive encouragement and lessons thereform, to face the challenges of the future. For examples, while speaking of India's tradition of scholarship the Report says:

> "A high tradition of scholarship has been traditional in our country. Manu said that all the people of the world would come to this country to learn from her intellectuals the lessons of moral behaviour. This intellectual leadership seems to have deserted us. In this world of change, the intellectual rank of nations, like their material prosperity, does not continue in the same state. A people which relaxes its efforts in any department, falls behind its neighbours in that department. How we fell behind the advanced nations of the world in the matter of learning and science, it is not necessary to enquire. We must make a sustained effort to raise ourselves up".[10]

No dope for complacency! Yet it is heartening to read these lines. Or again:

> "Cultures are alive and healthy only when they are creative, only when they are responding to some new challenge, physical, social or spiritual. When we rest on our oars we stagnate. The decadent periods of Indian culture were those when we idolised our past achievements and lost the spirit of adventure. When the sources of creativity dried up, culture became barren. Today we have to build a world of friendly, prosperous human beings. It can only be done by an extension of the spirit which has sustained India through all its vicissitudes. Sylvan Levy refers in vivid terms to the greatness of the Indian spirit in these words: 'From Persia to the Chinese Sea, from the icy regions of Siberia to the islands of Java and Borneo, from Oceania to Socotra, India has propagated her beliefs, her tales and her civilisation She has left indelible imprints on one-fourth of the human race in the course of a long succession of centuries. She has right the to reclaim in universal history the rank that ignorance has refused her for a long time and to hold her place among the great nations of the world summarising and symbolising the spirit of humanity".[11]

Holding aloft the Indian value system and the Indian perspective and establishing its relevance to the modern age is among the strong points of the Report. So is also the balance between the past, the present and the future.

Aims of university education: An inspired expression

The Commission analyses with rare insight and philosophic depth the challenges and the tasks of the new leadership, who would need power of "intellectual analysis and imaginative insight",[12] to cope up with times full of cataclysmic change and modern complexity. If the great and varied tasks which India faces have to be accomplished, and our vast natural resources and human energies are to be brought together, then the universities must "create knowledge and train minds" who would do it. Old guidelines are breaking down and are being questioned. "If India is to face the confusion of our time, she must turn for guidance, not to those who are lost in the mere exigencies of the passing hour, but to her men of letters, and men of science, to her poets and artists, to her discoverers and inventors. These intellectual pioneers of civilisation are to be found and trained in the universities, which are the sanctuaries of the inner life of the nation".[13] These leaders should be able to view the present not as an isolated span of time but as "a summary of the past and a prophecy of the future" and should approach their tasks in the present "with the quality of reverence and the spirit of adventure"—reverently garnering what is relevant in the past and peeping into the future in a spirit of adventure. For this the universities must develop in them faith and a sense of direction. They must provide them with "a coherent picture of the universe",[14] develop in them "a sense of perspective, a synoptic vision".[15] Education must give them both knowledge—an intellectual understanding of things—and wisdom, when something would enter into the depths of their being and awaken in them "an innate ability to live the life of the soul".[16]

The sense of direction is provided by the Constitution which enjoins on us "a quest for democracy through the realization of justice, liblerty, equality and fraternity".[17] This represents the judgement of "our farsighted and sensitive leaders" of the best in our heritage and most relevant in the context of the present.

The educational imperatives of these general principles are then worked out by the Commission.

"*Democracy*", says the Commission, "affirms that each individual is a unique adventure of life".[18] Individuals may be broadly categorised into reflective, emotional or active according to the predominance of "cognition", "feeling" or "will". Each type has further sub-divisions. For example, a reflexive type may have philosophic, scientific, mathematical or linguistic talents. It is the function of education to discover the precise nature of each individual student and to enable him to realise his full potentiality "in the face of the actual world of men and things",[19] by imparting knowledge and skills. Education, however, cannot be imposed. "It is a process of leading up the inward nature to its fulfilment. All true development is self-development".[20]

The individual differences became pronounced at the secondary stage. Hence the necessity of providing diversified courses at this stage and all these courses must command equal prestige.

While differences are important, equally important is their common need to develop, in a balanced way, the body, mind and the spirit. The body must be developed through physical education, games and sports; the mind through the study of our natural environment with the help of science and technology, our social environment—the social forces that shape our society and social institutions—through the study of social sciences; and the spirit through the study of humanities. "The purpose of humanities", says the Report, "is to enable man to understand his inner aspirations and ideals".[21] Through the study of the mother tongue and its literature as well as of arts, we get into the spirit of our people. Philosophy "deals with conduct and the ends of life".[22] "Broadly speaking", continues the Report, "the three divisions (natural sciences, social sciences and humanities) deal with facts, events and values. Their methods are different, though they are used in all studies in different degrees . . . whatever be our subjects of study, we must be able to observe carefully, think effectively and use our judgement properly".[23] In view of the unity of mind and the interdependence of knowledge, knowledge of various subjects should be given in an integrated fashion and not as disconnected facts and events. And "In a sense every study should excite and satisfy the different mental powers. It must give the pupils intellectual vision, aesthetic enjoyment and practical pawer".[24] The education that is given to build this basic personality, is called General Education. Its difference from professional education is not necessarily in content but in the objectives. While General Education confines itself to general concepts underlying a subject with appropriate illustrations to concretise them, professional education aims at professional competence and expertise. The most important function of all education and for all men is to liberate them. "True freedom is inward, a function of mind and spirit. The inner fearlessness is the affirmation of human individuality".[25] Our education should encourage development in the members of "fearlessness of mind, strength of conscience and integrity of purpose".[26] According to the Indian tradition, education is "initiation into the life of spirit, a training of human souls in the pursuit of truth and the practice of virtue. It is a second birth, *dvitiyam janama*".[27]

Lastly, education in a democracy has a dual role: to conserve and to evolve. "Education is a means by which society perpetuates itself".[28] Totalitarian societies have used it for this purpose. In a democracy, however, it has also "to break new ground for new values and make them possible".[29] And the education system has to be flexible, capable of changing in response to changing needs of society.

In a land of widespread poverty and inequalities *justice* requires increased production and equitable distribution. For the former, we require scientists and technologists, turned out by our educational institutions in required proportions. We also need a decentralised economy based on agriculture and cottage industries supported by properly controlled essential large-scale industry, All this will require large public programmes. And we will need men to administer them. "We need men of broad experience, mature outlook and sound judgement", "who can turn a group of specialists into a working team and who can combine imagination and practicability into a sound public programme. Men trained for this kind of administrative and political leadership", said President Truman, "are rare indeed".[30] It is this rare breed of managers whom also the universities must train. Both these categories, however, must be trained in a new professional ethics where social responsibility is kept to the fore. "While graduates in law, medicine and engineering acquire specialised information and technical skill, they should also be inspired by high social aims as no group can pursue private ends without regard to the social consequences of their activities. . . . Individual freedom entails social responsibility".[31] The Commission warns us against narrow materialism: "Our obsession with the temporal, our passion for ever-increassing velocity of movement require to be tempered by attention to the world of values 'the unchanging forms' of Plato".[32] For "we are building a civilisation, not a factory or a workshop. The quality of civilisation depends not on the material equipment or the political machinery but on the character of men. The major task before education is the improvement of character".[33]

Liberty being the battle cry of democracy, freedom of individual development is its basis and autonomy of the universities its natural corollary. "We must resist", says the Report, "in the interest of our own democracy, the trend towards the government control of the educational process".[34] "Intellectual progress demands the maintenance of the spirit of free enquiry".[35] "And to lead us from darkness to light, to free us from every kind of domination except that of reason, is the aim of education".[36]

The Educational imperatives of *equality* are (a) freedom of conscience and (b) equality of opportunity. "Democracy as a way of life and not a mere political arrangement requires of its adherents a jealous regard not only for their own rights but equally for the similar rights of others".[37] Education must develop this social temper and discharge its responsibility as "The great instrument of social emancipation by which a democracy establishes, maintains and protects the spirit of equality among its members".[38] To ensure equality of opportunity our system "must provide for every young person education to the extent that he can profit from it and of a character best designed to ensure the maximum development of his nature. It must of course recognise differences of gifts and interests".[39] To ensure that no child is handicapped by poverty to rise to the top of the ladder, the Commission recommended a generous system of scholarships covering both tuition fees as well as boarding and lodging charges. Reservation of seats in educational institutions for backward classes, which have suffered from centuries of deprivation, may have to be provided but not more than 30 per cent of the total number of seats and for not more than 10 years. Communal quotas, as in Madras, are indefensible. For "the fundamental rights is of the individual, not of the community". And communal representations would break up national integrity. "Education", said the Commission, "should not be used for deepening the very inequalities which it is designed to prevent".[40] Special consideration for the handicapped, on account of humane considerations, and for special talent, for its vast impact on society, may however be justified.

Fraternity has to be developed both at the national and international levels. For the world today is a very close one. We have to improve the quality of the individual and build in him the desire, capacity and the will to cohere with his fellows. "Out of the mass of individuals who have enrolled in a college we have to build a community".[41] "It is in educational institutions that we can train character, build personality, by the discipline of body, intelligence and will".[42] The youth today is "restless, . . .discontented with the older generation, conscious of talents and cramped by lack of opportunity, which draws simultaneously towards and away from the Indian pattern of life eager, thoughtful, suspicious", and requires to be handled with understanding and sympathy. The prime necessity is understanding and interest of the teacher. A residential and corporate life, with various co-curricular activities, organised on democratic lines, where the students and the teachers are in very close contact, is the best method of developing a sense of community among the students. Through close contact and understanding, the teacher not only imparts instruction but transmits the power of spirit.

The most powerful binding force, however, is a reverent but critical study of our cultural heritage. And in some of the most glowing paragraphs the Commission brings out its true nature and greatness. "Culture", says the Report, "holds a society together and gives the individual balance and perspective. . ., culture is intellectual alertness, receptiveness to beauty, humane feeling, social enthusiasm".[43] "It is the life of spirit that has shaped and unified our collective existence and has been the real bond of oneness among the Indian people".[44] The Report goes on to say: "After centuries of stress and conflict India has gradually evolved a common civilisation, a collective consciousness which embraces wide varieties of temperament, tradition, ways of thought and belief". The ideals of Indian culture "are recognised not so much as superstitions but as living truths capable of satisfying the spiritual needs of humanity".[45] "Religion is not so much a revelation to be attained by faith as an effort to unveil the deepest layers of man's being and get into enduring contact with them. Belief and conduct, rites and ceremonies, authorities and dogma are subordinate to the act of conscious self discovery and contact with the divine. Their function is to aid the growth of spirit by supplying supports for a task that is strictly personal. He who has seen the real is lifted above all narrowness and released from a multitude of opinions. The name by which we call God and the rites by which we approach Him do not matter much. Toleration in the positive sense of an active appreciation of other faiths has been characteristic of India's religious life. Toleration is the homage which the finite mind pays to the inexhaustibility of the Infinite".[46] This self-discovery or integration with one's deeper self links us with the Divine and all humanity. The test of authentic spiritual insight is an increased integration of the personal life, quickened sensibility, heightened power and universal love".[47]

Our students and teachers, says the Commission, must study the past, "No nation is healthy which parts company with its traditions."[48] Our culture is one of the most ancient and has been a living culture. It has been evolving, synthesising and absorbing into itself diverse cultures, which were not in coflict with its essentials. It has been welcomed by and deeply influenced "One fourth of the human race in the course of a long succession of centuries."[49] Tagore had similarly said: "To know my country, one has to travel to that age, when she realised her soul and thus transcended her physical boundaries, when she revealed her being in a radiant magnanimity which illumined the eastern horizon, making her recognised as their own by those on alien shores who were awakened into a surprise of life. . ."[50] The past is, however, not to be accepted blindly. "We have to be critical and selective and use the past to illumine the present."[51] "The greatness of a culture", says the Commission, "consists not in its permanence, which is a relative term, but in the qualities which it is able to contribute to human growth, in the way in which it is able to mould the hidden drama of history which is a perpetual struggle between the external environment and the inner values of man."[52] It is this contribution of spiritual quality to world history that constitutes the real greatness of India's culture. "Even in the darkest days of degradation the light of India's culture never failed. It may have flickered it was never extinguished. There were loving hands which cherished and tended it. Today it is burning with a renewed glow. If it is to become a consuming flame we must become aware of its past greatness and contemporary value."[53]

International fraternity is the natural extension of national fraternity in the democratic context. "If we accept the interdependence as well as the individuality of all men, we must develop a sensitivity to the hopes and fears, needs and emotions of human beings everywhere."[54] "We must," therefore, "secure recognition and acceptance of the oneness of the world in the thinking of the people."[55] We must recognise "that the different cultures are dialects of the one language of the spirit."[56] That is the way of building the defences of peace in the minds of men where wars, as UNESCO states in its preamble, actually begin. The universities are well placed to propagate this idea of world citizenship, which should be made a part of the general education of all students. The universities must provide for "the study of the different aspects of international affairs, such as the nature and development of their civilisations and cultures, nationalism in its relation to internationalism, tensions leading to wars, structures and operation of the various world organisation designed to further international security and the peaceful solution of international problems."[57]

The chapter close with the following stirring words: "The greatness of a country does not depend on the extent of its territory, the length of its communications or the amount of its wealth, nor even on widespread education or equitable distribution of wealth, important as all these things are. If we wish to bring about a savage upheaval in our society, *a rakshasa raj*, all that we need is to give vocational and technical education and starve the spirit. We will have a number of scientists without conscience, technicians without taste, who find avoid within themselves, a moral vacuum and a desperate need to substitute something, anything for their lost endeavour and purpose. Society will then get what it deserves. If we claim to be civilised, we must develop thought for the poor and the suffering, chivalrous regard and respect for women, faith in human brotherhood regardless of race or colour, nation or religion, love of peace and freedom, abhorrence for cruelty and ceaseless devotion to the claims of justice.

"We cannot preserve real freedom unless we preserve the values of democracy, justice and liberty, equality and fraternity. It is the ideal towards which we should work though we may be modest in planning our hopes as to the results which in the near future are likely to be achieved. "Utopias are sweet dreams," wrote Kant, 'but to strive relentlessly towards them is the duty of the citizen and of statesmen as well'. Universities must stand for these ideal causes which can never be lost so long as men seek wisdom and follow righteousness."[58]

In this chapter, the Commission analyses with rare insight and scholarship the nature of the human mind and social phenomena and the nature and purposes of education. It is revealing how great seers of the past had already "seen" what later ages discovered centuries thereafter. How modern was the knowledge of the ancients ! Again, it is fascinating how the Report moves over the centuries and from East to West, to and fro, to draw upon the common heritage of modern man! How basic are the challenges with education faces ! The fundamentals of the learning process remain the same. So does man remain basically the same. Hence the permanence of human values.

IV

IMPORTANT RECOMMENDATIONS

The main recommendations of the Commission are:

I. *Teachers*

The central role of the teacher in the educational process should be recognised and their salaries and conditions of service improved.

II. *Libraries, Laboratories, Text-books*

Physical facilities like libraries and laboratories should be improved, lectures and tutorials should be more effectively organised and there should be no prescribed text-books.

III. *Structure*

Admission to universities should be after 12 years of schooling. So good intermediate colleges should be set up whose teachers should be upgraded through refresher courses provided by the universities. These would consist of two top classes of the high schools and two classes of the intermediate of the degree colleges. Apart from giving general education, these colleges would also give education a vocational bias to meet the varying needs of the students.

The degree course should comprise of 3 years—for Honours immediately and for pass as soon as possible.

The Master's courses should be of one year's duration for Honours students and of two years for Pass students.

To reduce pressure on universities and for more effective employment for the large majority occupational institutions should be provided and students from the general stream diverted to education and training therein at the end of 10 years and 12 years of schooling.

These were inter-connected recommendations and had earlier been made by the Calcutta University Commission, though implemented to a very limited extent in U.P. only. They are basic recommendations in the context of the Indian scene. They were repeated by the Education Commission of 1964-66 and have been implemented slowly, steadily but painfully. Effective vocationalisation of secondary education is still distant. The main constraints have been financial, organisational and the vested interest of teachers who would be affected by the reforms.

IV. *General Education*

General education should be introduced at the secondary and college stages to safeguard against the dangers of over-specialisation. The professional and the general components should be mixed in proportions suiting each professional group so that the product is both a good citizen as well as a good professional.

The tendency to narrow specialisation forced by the growth of knowledge and the high competitiveness of the market place has become very pronounced and so have its dangers become more obvious. The way to fight them is to combine professional education and general education, which gives man the basic knowledge of all important branches of knowledge—the underlying general concepts with illustrations and the basic vocabulary. "Unless the tribal connections of all phases of experience are kept in mind, the convenient device of courses of study may become barriers which prevent our realising the unity of knowledge and experience."[59] General education is "the most discussed topic of college and university education today."[60] Among many large American universities every student has to take a "core programme" of basic studies.

V. *Indian Contribution*

In every subject the Indian contribution in that regard must be included.

Students should be encouraged to undertake study of Sanskrit in their degree classes. Rich tributes by world authorities have been paid to this glorious heritage of ours. "The Sanskrit language," says the Report, "contains works which are priceless possessions of humanity and it will always have a place in a scheme of humanistic culture."[61]

VI. *Post Graduate Education and Research*

In regard to Post-Graduate education and research in arts and science, the Commission's thrust was for both quantitative expansion and qualitative improvement through better provision of material assistance—increased research grants and scholarships, additional teachers, opening of new departments and strengthening of existing ones etc.—and improvement of machinery for selection, through better exploitation of indigenous materials for research in humanities, through encouragement to people wanting to take up careers in research after Ph.D. by instituting Research Fellowships for very carefully selected scholars etc. To make up the shortages anticipated by the Scientific Manpower Committee, the Commission wanted to cast our net wide so that potential talent could be caught at an early stage. The Commission especially emphasised the need for making good our existing deficiency in teaching and research in the biological sciences. So also they laid especial emphasis on increasing facilities "for study and research in border-line sciences like Biochemistry, Biophysics, Geochemistry, Geophysics, etc."[62]

VI. *Professional Education*

The chapter on Professional Education is one of the most valuable and original chapters of the Report. Its special features are the new concept of professional education that it gives and the way it is to be concretised in teaching practice; and the way it adapts foreign experience to Indian conditions—American, British and Dutch in agriculture, American in engineering and the new emerging professions etc. There is a growing tendency among the thinkers of developed countries that the term 'profession' should not refer to any particular calling but to "standards and attitudes."[63] A professional man if he is to claim "the respect and protection of society,"[64] should have had not only "thorough and disciplined scholarship and training"[65] but also "a sense of social responsibility, an appreciation of social and human values and relationships."[66] Without the latter, high technical skill may result in "great internal stress and even social deterioration."[67] These concepts must be embodied in professional education from the beginning so that habit is formed to look at technical problems in their total socio-economic framework. "Professional study," says the Commission, "is so demanding that unless the spirit and habit of seeing the total problem, professional, human and social, are in the very spirit and texture of professional teaching itself, human and social considerations will tend to fade into the background with memories of adolescence. General human motive and purpose need to be so much a part of professional training that to the student they will be one and inseparable."[68]

(1) *Agriculture*: In the context of food shortage and the absence of an overall policy and philosophy of agriculture, the Commission recommended:[69]

"(i) that agricultural education be recognized as a major national issue;

(ii) that, since in a democratic country sound agricultural policy must rest on the understanding and participation of those engaged in agriculture, the study of agriculture in primary, secondary and higher education be given high priority in national economic planning;

(iii) that, so far as is feasible, agricultural education, agricultural research, and the formulation of agricultural policy, shall be in the hands of persons and groups or associations of persons, who by intimate association, participation and experience, have first hand, penetrating knowledge of agricultural life;

(iv) that, so far as is feasible, agricultural education be given a rural setting, so that it shall include direct participation in and experience with agricultural life and practice;

(v) that present agricultural colleges be strengthened in equipment and in teaching staff, and that each one, in addition to a programme of well proportioned general and agricultural education, endeavours to find some phase of agricultural practice, or some related interest such as agricultural credit or agricultural co-operatives, in which it shall undertake to achieve mastery;

(vi) that new agricultural colleges, where possible, be associated with new rural universities so that agricultural education may be supported and enriched by contact with other fields, and by common use of personnel and equipment; and that each such new agricultural college also explore for some phase of agriculture or related interest, often particularly related to its locality, in which it will strive to become an outstanding authority;

(vii) that a widespread series of experimental farms be developed by the central and provincial governments as resources and adequately trained men become available; these experiment stations to represent all major types of soil, climate, crops and topography (The system of experiment stations in the U.S.A. and the Rothamsted Station in England, are good types); that as nearly as possible every basic elementary school, every rural secondary school and every rural university should have its own small experimental farm, so that the spirit of research and experiment shall pervade all rural life, and that where practicable every experiment station or experiment farm be located in association with a school or college where students on work and study programmes may provide labour, while becoming acquainted with experimental and research methods;

(viii) that the existing agricultural research laboratories be supported and expanded to the full extent that the quality of their work justifies;

(ix) that new post-university research centres be established as university research centres;

(x) that the Indian Council of Agricultural Research continue to be supported and developed as a clearing house and co-ordinating agency for all advanced agricultural research centres, as a source of publications, and as a source for publicizing the valuable results of research by visual education, radio bulletins, library loans, micro-film service, and by other means;

(xi) that an Institute of Agricultural Policy be established probably under the Council of Agricultural Research, for research and study toward the clarification of over-all, long-time agricultural policy for India, in accord with the fundamental aims of the Indian Constitution, and that consideration be given to the feasibility of assembling an international staff of qualified men for that purpose;

(xii) that an agricultural education and research panel, attached to the University Grants Commission, along the lines proposed in this report for engineering education and research, be established for apportioning available resources for agricultural education and research;

(xiii) that the University Grants Commission, in association with the Indian Council of Agricultural Research, make an inquiry into the merits of public policy involved in the levy of cess taxes on specific commodities, such as cotton, sugar, jute, lac and cocoanuts, as a source of research and educational funds; as compared with the policy of block grants from public appropriations, to be apportioned by the University Grants Commission; and

(xiv) that since fisheries, like agriculture, deal with food and fertilizer supply, and since they have been historically associated with agriculture in administration, a careful inquiry be made as to the wisdom of rapidly developed and far-ranging research on ocean resources as a possible means for rapidly and greatly adding to the nation's food and fertilizer supply."

(2) *Commerce:* In regard to commerce, the Commission recommended:

(i) that during the period of his study at the university, a commerce student should be given opportunities for practical work in three or four different kinds of firms;

(ii) that after graduation some of them be advised to specialise in a practical profession like Accountancy and receive the requisite practical training;

(iii) that the training for the Master's degree in Commerce be less bookish and confined to a comparatively small number."[70]

(3) *Education*: In regard to education the Commission emphasises that education is a multi-disciplinary discipline, where education is the integrating focus. Education itself is "a life to be lived and purposeful activities to be shared"[71] within the framework of "the place of the school in the nation's life and the right training of children in the school."[72] In view of the stupendous challenges faced by Indian education research should be planned and coordinated on an all-India basis. Practice should be given much greater weight than theory and theory itself should be related "to local circumstances."[73] The bulk of the staff in training colleges should be from those who have had experience of school teaching.

(4) *Engineering and technology*: The main recommendations of the Commission in this regard have already been given in the preceding chapter. There is, however, one recommendation which needs to be more fully spelt out since it is of great significance for India with her extremely urgent need to develop widespread capability for self-employment, for more effective exploitation of her scattered resources through numerous decentralised units of production, and for development of backward regions. This is the recommendation to start new engineering schools, each specialising in a small industry, the need for which has been carefully ascertained by "creative thinking and critical inquiry, checked by all available experience."[74] And the students are trained in every phase of the operation, from the buying of raw materials to the marketing of finished goods. The products of such institutions can start their own production units and the school can provide consultation services. The emergence of a cluster of industries growing round the school will "reinforce each other in technology, craftsmanship and marketing. A regional 'know-how' tends to accumulate. Research and other technical services may develop."[75] For instance, one or more engineering schools in the sugar growing areas might specialise in rural technology, and especially in turning waste materials like molasses and sugar cane bagasse into industrial products. The result might be many small industries in this field in one or two sugar producing areas. An engineering school on the Malabar coast might specialise in varied products of the cocoanut, palm, and in industrial uses for the rutile, monazite, sillimanite, zirocon, and ilmenite sands so abundant on the coast."[76]

The academic side of the course will be organized as follows: "The technical phases of such training may be mechanical, electrical or chemical engineering on a foundation of general engineering science. The business phases should include such subjects as accounting, industrial relations, production methods, marketing and business ethics.

"In many cases the students' entire course might be planned around some particular type of product which they may later manufacture, such as lighting fixture or fountain pens, tube well pumps or products from sugar cane waste. Starting with general courses, specialisation would gradually increase through the college years."[77]

Two difficulties would need to be overcome: "that of finding the required type of teachers who would combine all-round engineering and business ability, focussed on the production of some specific article,"[78] and have "a spirit of adventure, resourcefulness and self-reliance. Today India does not have such teachers. For our engineering colleges produce largely for employment either in government or in big industry. But a start can be made with some schools starting industries where the students and teachers work together and learn by doing. If such industries prove successful they can have the additional advantage of making these institutions self-supporting to some extent. "In America a few of the smaller institutions largely support themselves in this way. Among such are Madison College of Madison, Tennessee, and Berrian Springs College, at Berrian Spring, Michigan."[79] These teachers could also visit other countries to see how modern, independent, small industries are organised in these countries and how the problems regarding production, industrial relations, marketing etc., are tackled there. This would be the quickest way of upgrading our technology in these varying areas. The second problem, that of finance, also need not deter us. The Commission points out that there are a large number of small and simple articles which we import or do without which could easily be manufactured in our own country. It is not realised, says the Commission, "that many industries are started by individuals with perhaps only a few hundred rupees of capital. While research is essential to modern industry, frequently only very simple research is necessary for a beginning."[80] And starting small is an advantage. For the "process of starting small, and of thoroughly learning the industry from first hand experience is excellent preparation for gradual and sound growth."[81]

These engineering schools, the Commission is of the view, "should not be isolated, but should be departments of universities, so that teachers of science, economics, industrial relations, and languages shall be available, and so that engineerring students may have the advantage of an all-round cultural atmosphere."[82] It has been the experience in the United States that a number of such schools not associated with universities have steadily declined. The Commission believed that "the relatively slow progress of engineering studies in this country is not due entirely to foreign rule, but also to the loose liaison between engineering colleges and universities."[83]

The advantages of such schools in our context would be:

(i) They will develop a large number of entrepreneurs and create a large number of centres of initiative so essential for democracy and economic decentralisation which is our declared goal.

(ii) Widespread entrepreneurial talent thus thrown up will lead to the growth of a large number of small industries and give a boost to national production and productivity in a manner as will automatically secure more equitable distribution.

(iii) Such men will also explore and exploit India's scattered natural resources with the possibility of the development of areas hitherto considered backward due to lack of identification of available resources.

(iv) These developments would have considerable implications for spreading the inclination and opportunities for self-employment, which is the key to the problem of the unemployment of the educated—one of the most explosive factors in the country's socio-economic situation.

(5) *Law*: While in our ancient universities law occupied a very eminent position and while we have/had eminent practitioners of law and learned judges, because of our dependent status till lately and the very limited opportunities it offered to students of law, our legal education has been organised in a very low key. The position has to be changed and we have to produce great practitioners and scholars of law if we are to discharge our responsibilities in regard to our constitutional development and international relations, and legal education must be given the same status and attention as it commands in Europe and America. For the purpose the Commssion recommended, as a first step:

"(i) that our law colleges be thoroughly re-organised;

(ii) that the staff of the law faculties be recruited and controlled by the universities in a fashion similar to Arts and Science faculties;

(iii) that a three-year degree course in pre-legal and general studies be required for admission to law courses;

(iv) that a three-year degree course be offered in special legal subjects, the last year to be given over largely to practical work, such as apprenticeship in advocates' chambers;

(v) that the staff shall be whole-time and part-time. The whole-time staff should teach largely in the fields of fundamental subjects and the part-time staff more largely in the fields of practical application and procedures. Part-time staff members should be recruited on a contract basis and paid only if full services are performed;

(vi) that law classes be scheduled only during the regular hours of teaching;

(vii) that students pursuing degree courses in law shall not be permitted to carry other degree courses simultaneously except in a few instances where advanced students have proved their interest and are studying related subject in law and some other fields;

(viii) that opportunities for research be available in every law faculty, particularly in Constitutional law, International law, Administrative law, Jurisprudence and our systems of Hindu and Muslim law;

(ix) that progress tests be introduced and examinations be by compartments both time and subject-wise."[84]

(6) *Medicine*: In regard to medicine the Commission recommended:

"(i) that the maximum number of admissions to a medical college be 100, provided the staff and equipment for that number are available;

(ii) that all the departments of study which require hospital facilities be located in a single campus;

(iii) that there be 10 beds per student admitted to a college;

(iv) that training in a rural centre be required both in the under-graduate and graduate stages;
(v) that post-graduate training be offered in certain colleges taking into account the personnel and the equipment essential for the purpose;
(vi) that Public Health Engineering and Nursing be given greater importance;
(vii) that facilities for research in indigenous systems be provided; and
(viii) that History of Medicine with special reference to Indian systems be taught in the first degree courses in Medicine."[85]

Of special interest is the emphasis on research in the Indian systems of medicine and on the history of medicine "with special reference to Indian systems," which is all of a piece with the valuable and heartening approach of the Commission, in contrast to the earlier Commissions and Committees, where indigenous traditions of scholarship were either ridiculed or ignored.

VIII. *Religious Education*

India's dilemma is that religion as providing food for the spirit has to be at the heart of the educational process. And yet it is impossible to introduce denominational religion in view of the multiplicity of religions in the country. To meet the situation the Commission has recommended:

"(i) that all educational institutions start work with a few minutes for silent meditation;
(ii) that in the first year of the Degree course lives of the great religious leaders like Gautama the Buddha, Confucius, Zoroaster, Socrates, Jesus, Samkara, Ramanuja, Madhava, Mohammad, Kabir, Nanak, Gandhi, be taught;
(iii) that in the second year some selections of a universalist character from the Scriptures of the world be studied;
(iv) that in the third year, the central problems of the philosophy of religion be considered."[86]

IX. *Medium of Instruction*

In regard to the other vexed and vital question of the medium of instruction, the Commission recommended:

"(i) that the Federal Language be developed through the assimilation of words from various sources and the retention of words which have already entered into Indian languages from different sources, thereby avoiding the dangers of exclusiveness;

(ii) that International technical and scientific terminology be adopted, the borrowed words be properly assimilated, their pronunciation be adopted to the phonetic system of the Indian language and their spelling fixed in accordance with the sound symbols of Indian scripts;

(iii) that for the medium of instruction for higher education English be replaced as early as practicable by an Indian language which cannot be Sanskrit on account of vital difficulties;

(iv) that (a) pupils at the Higher Secondary and University stages be made conversant with three languages—the regional language, the Federal language and English (the last one in order to acquire the ability to read books in English); and (b) Higher education be imparted through the instrumentality of the regional language with the option to use the Federal language as the medium of instruction either for some subjects or for all subjects;

(v) that for the Federal language one script, Devanagari, be employed and some of its defects be removed;

(vi) that immediate steps be taken for developing the Federal and Regional languages:

(a) A Board consisting of scientists and linguists be appointed to prepare a scientific vocabulary of words which will be common to all Indian languages and also to arrange for the preparation of books in different sciences to be rendered into all Indian languages;

(b) Provincial Governments be required to take steps to introduce the teaching of the Federal language in all classes of Higher Secondary, in Degree Colleges, and in Universities;

(vii) that English be studied in High Schools and in the Universities in order that we may keep in touch with the living stream of ever-growing knowledge".[87]

The policy recommended is a balanced one and has been accepted as national policy, though there are many hurdles in its implementation.

X. *Examinations*

The examination system had been under attack since the beginning of the century and its defects were analysed by both the university commissions of 1902 and 1917-19. The 1949 Commission agreed with the identification of defects and declared: "We are convinced that if we are to suggest one single reform in university education it should be that of examinations".[88]

The Commission recommended the adoption of the objective tests—both intelligence or psychological and achievement tests—developed in the United States over 30 years of dedicated work at a cost of millions of dollars after duly adapting them to Indian conditions. This should be combined with a reformed examination system of the easy type. The major reforms, the Commission recommends, are : internal assessment, modular system, and the setting and marking of papers according to far more rational and meaningful criteria than the existing ones. The emphasis on this type of examination should be expressly on "thought, acute reasoning, critical exposition, creative interpretation and other types of mental activity in relation to the materials of the course".[89] The Commission made detailed recommendations as to the effective introduction of these reforms. "Viva Voce examination should be employed only for post-graduate and professional degrees. They should be designed, however, to test the candidate's competence in the fundamentals of the field of study to which the problem of his study belongs".[90]

XI. *Students' Activities and Welfare*

"Education of the youth", says the Commission, "and the discovery of new truth are the principal functions of universities. The boys and girls of today are the matured citizens of tomorrow. An educated citizenry, according to Edmund Burke, are a greater defence to a democratic country than a vast standing army".[91] In this education, the development of strong bodies, correct habits, democratic patterns of behaviour, recreation, discipline, etc., through a well-directed corporate life, are important ingredients.

The Commission examined various aspects of student life and made detailed recommendations in regard to fair admission and provision of opportunities; health of students; physical training, National Cadet Corps and social service; hostels, unions, discipline and student welfare. Some of the more important recommendations[92] are:

(i) "that admission to universities and colleges be based upon merit without discrimination of any kind";

(ii) "that in the first degree stage, the widest possible variety of courses be offered to enable local students to have opportunities which would otherwise the denied";

(iii) "that health service should include sanitary inspection of campus, hostels, dining rooms, kitchens, and off-campus residences and regular reports submitted to the Vice-Chancellor or other responsible administrative officer";

(iv) "that each university and college remote from a university centre shall have a Director of Physical Education with the status, pay and training comparable to heads of other departments";

(v) "that two years of physical education be required for all students, men and women, except those who are physically unfit or who are in the National Cadet Corps";

(vi) "that the Center should take over from the Provinces and States the responsibility for the administration of the National Cadet Corps";

(vii) "that social service be encouraged and remain on a completely voluntary basis";

(viii) "that universities establish reasonable standards for hostels, residences and corporate activities as a condition of college affiliation, that those standards be enforced and that no affiliation be granted in the future until standards have been met";

(ix) "that all dining rooms in hostels on the campus be under the direction of a trained dietician;

(x) "that the Union be operated by students and for students without interference of university authorities"; and

(xi) "that an office of Dean of Students be set up in colleges and universities".[5]

XII. *Women's Education*

The Commission is of the view that women should be given as good an education as men but not identitical. Their own identity should be respected and their supremely important role in society should be recognised and they should be prepared for it. In a very thought-provoking paragraph the Commission says:

"A well-ordered household helps to make well-ordered men. Many a competent manager of business or of public affairs has become so in part because as a body he lived in a home that was intelligently and efficiently managed by his mother. Order and efficiency thus became second nature to him. It is doubtful whether many men ever achieve orderly and efficient living whose early home environment was one of confusion and disorder. Probably there would be no quicker way to raise the general level of economy and efficiency in Indian life than to make women interested and competent in the efficient, economical and convenient planning of their homes. A spirit of pioneering, of experiment and research in the planning and management of even a simple home can add variety and zest to living, as well as economy and convenience, and can stimulate originality and resourcefulness in the children of the home. Thus good home management is more than a convenience for the housewife and her family; it is the foundation of the orderly state, and the teaching of good house management is the first lesson in good government, as Confucius said."[93]

They made the following recommendations:

"(i) that the ordinary amenities and decencies of life should be provided for women in colleges originally planned for men, but to which women are being admitted in increasing numbers;

(ii) that there should be no curtailment in educational opportunities for women, but rather a great increase;

(iii) that there should be intelligent educational guidance, by qualified men and women, to help women to get a clearer view of their real educational interests, to the end that they shall not try to imitate men, but shall desire as good education for women as men get. Women's and men's education should have many elements in common, but should not in general be identical in all respects, as is usually the case today;

(iv) that women students in general should be helped to see their normal places in a normal society, both as citizens and as women, and to prepare for it, and college programmes should be so designed that it will be possible for them to do so;

(v) that through educational counsel and by example the prevailing prejudice against study of home economics and home management should be overcome;

(vi) that standards of courtesy and social responsibility should be emphasized on the part of men in mixed colleges;

(vii) that where new colleges are established to serve both men and women students, they should be truly co-educational institutions, with as much thought and consideration given to the life needs of women as to those of men. Except as such colleges come into existence there are no valid criteria for comparing segregated education with co-education;

(viii) that women teachers should be paid the same salaries as men teachers for equal work."[94]

XIII. *Constitution and Control*

In regard to the Constitution and Control the Commission recommended:

"(i) that University education be placed on the concurrent list;

(ii) that the concern of the Central Government with the universities be with regard to finance, co-ordination of facilities in special subjects, adoption of national policies, ensuring minimum standards of efficient administration and liaison between universities and national research laboratories and scientific surveys etc.;

(iii) that for allocating grants to universities a Central Grants Commission be established, its composition and function to be as indicated;

(iv) that the Grants Commission be helped by panels of experts in different branches;

(v) that there be no university of the purely affiliating type;

(vi) that government colleges be gradually transformed into constituent colleges of the university;

(vii) that private colleges be recognised only on satisfying the university that:

(a) they are eligible for grants-in-aid; and
(b) that they are able to undertake the internal assessment of students' work;

(viii) that college governing bodies be properly constituted (and the number of colleges affiliated to a university be limited);

(ix) that the aim of an affiliated college be to develop into a unitary university and later into a federative one;

(x) that the authorities of the University be as follows:

- (a) The Visitor (The Governor-General);
- (b) the Chancellor (generally the provincial Governor);
- (c) the Vice-Chancellor (a whole time officer appointed according to the methods indicated);
- (d) the Senate (Court);
- (e) the Executive Council (Syndicate);
- (f) the Academic Council;
- (g) the Faculties;
- (h) the Boards of Studies;
- (i) the Finance Committee; and
- (j) the Selection Committee;

(xi) that a Grants Allocation Committee be constituted for provinces with universities of the teaching and affiliating type".[95]

The special features of these recommendations were that for the first time they defined the relations of the universities with the Government in the context of a federal structure. Secondly, it recommended an instrument—the University Grants Commission—to enable the Centre to discharge its responsibilities towards the universities. Thirdly, it had travelled a long way from the Indian Universities Act of 1904, with a very small elected element in the Senate. The Calcutta University Commission (1917-19) also gave predominance to the elected element but it made the Senate unmanageable—having "several hundred members", "representative of every important educational interest in Bengal".[96] With the result that they had to recommend a Committee of Reference, "to act on behalf of the Court in sundry matters". The University Education Commission recommended a manageable size of the Senate as well as overwhelming predominance of elected members.

XIV. *Finance*

The recommendations in regard to the financing of higher education were the logical corollary of the Commission's recommendations in regard to "Constitution and Control": increased governmental liability to help universities and colleges and the setting up of the University Grants Commission to allocate Central grants. They recommended:

(i) "that the State should recognise its responsibility for the financing of higher education;

(ii) that the aid to private colleges should be for buildings and equipment as also for the recurring expenditure, the latter to be on a uniform basis, say half of the present teachers' salaries and a third of other approved expenditure;

(iii) that steps be taken to amend Income-tax Laws to encourage donations for educational purposes;

(iv) that additional grants be made to colleges and universities in order to enable them to give effect to our recommendations;

(v) that the Government should contribute an additional annual amount of about ten crores for the development of university education during the next quinquennium;

(vi) that the University Grants Commission be set up for allocating grants."[97]

V

A DARING MODEL

The most comprehensive and daring model of restructuring of university education in the context of a most rational visualisation of the place of rural areas in India's national life was presented in the last chapter of the Commission's Report, entitled Rural Universities. It had the additional merit of building from below on the structure built up to the Basic stage fully and the Post-Basic stage partly by Gandhiji who, by common consent, understood rural India better than anyone else. A brief picture of this model, in juxtaposition with Gandhiji's fundamental ideas and the very dim outline of university education that can be gleaned from his writings and speeches has already been given in Chapter X. While dealing with rural areas, the model had considerable potency for effecting a radical transformation of the entire existing university system to bring it in line with the needs of modern India.

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PART III

Conclusion

CONCLUSION

1951 brought to a successful close perhaps the most tumultuous period in modern Indian history, involving millions of people, of all castes and creeds, passing through the experience of elemental passions let loose, creating hell on earth, as well as getting the most celestial glimpse of the highest manifestations of the human spirit. Through this churning of the mass mind, this mass purificatory bath, India emerged purer, with her honour retrieved and image refurbished. And from what she could well have been—the object of pity and ridicule of the world—she emerged as the hope of humanity facing annihilation through the philosophy of the atom bomb. Gandhiji brought the frail ship of State through the stormiest waters safe to shore with her population integrated, their faith in their leaders restored, with a vision of their destiny blazed before them and embedded in their deeper consciousness. They were enabled to relieve their great past traditions. A great science had been rediscovered from their hoary past and applied to their daily problems. A band of leaders had been given to them who had been purified through the fire of sacrifice and dedication. India was well set for a new leap forward, that of planned development. This was above all the achievement of one man, the Father of the Nation, who belonged to that tribe of the wise who link the sky and the earth, translating the highest truths into our daily acts and concerns.

It was this ladder of ascent from the mundane everyday life to man's resplendent, celestial destination, the glory of God, that he tried to build through his education system for the common man. For Gandhiji had no use for anything that could not be shared with the masses. And his educational aim was to draw out the best in every man and woman—body, mind and spirit. It was on the strength of this mass energy discovered and developed that Gandhiji hoped to build a non-violent world order, which alone could save mankind from its own conspiracy for self-annihilation.

Gandhiji's philosophy of life, whose educational imperatives he built into his educational philosophy, revolved round his central faith in God, who was Absolute Truth and Universal Love. As finite man could only realise relative truth—truth relative to the situation in which one was placed—while holding fast to his own perception of truth he must give equal respect to other people's perception of truth. Humility and tolerance in the active sense were consequently man's duty and were the solid basis for freedom, equality and universal brotherhood. In order to ensure that one's perception of truth was not another name for desire and one progressively moves nearer and nearer to Absolute Truth and to God, one must impose upon one's self utmost discipline and through every act of his serve mankind. To give a proper environment to create and sustain such self-disciplined free individuals devoted to the discovery and practice of truth one must have a non-exploitative order which meant a decentralised economic and political order. Economically, the unit would be a village or a small manageable group, self-sufficient in regard to its essentials of food and clothing and linked with bigger units on the basis of a mutually beneficial relationship of interdependence in regard to other matters. Self-reliance in regard to essentials would give each unit the strength to stand up against exploitation. Politically also, the village will be the basic unit connected with bigger and bigger units, not in an hierarchical way but in the form of ever-widening concentric circles, where no part can dominate any other. They will all mutually help each other to mutual advantage. The individual living non-violently would live for the family, the family for the village, and so on till we reach the global level. Parliamentary democracy, supported by a strong people's movement, would be kept on the right track and become really a government by the people and for the people. Such a State will have minimum powers and in the ideal, as society becomes fully non-violent, there is no function left for the State and the State withers away. Soçial tensions will be resolved through discussion and, if necessary, through non-violent non-co-operation. External aggression will also be met by non-violent non-co-operation. His philosophy has been defended by Gandhiji through reason as well as by demonstration to the extent that he got the opportunity to do so. It is both a rational and feasible philosophy and the only one that can effectively meet the philosophy of the atom bomb.

To make it feasible, he designed his education system to create the men who would do so. The system was based on the educational exploitation of the daily chores, so that they became the means of building up of the body, mind and spirit. This meant asking the "why and wherefore" of everything done, thereby developing an enquiring mind and the scientific temper which would start the process of rationalisation of all aspects of life and lead to its all-round improvement. The centre of the educational process will be the scientific practice of rural crafts which would create resources for maintenance and further development and lead to a progressively fuller exploitation of natural resources. The whole life in the school would be organised on the basis of co-operative and intelligent work and self-government. The spirit of service and dedication would pervade the whole atmosphere and inform every school activity. The children and the teachers would live together as a community and would be linked to the environing community by ties of mutual service. The work in the school would centre round agriculture and village industries. Agriculture would be based as full utilisation of human and vegetable waste and bullock and muscle power. The cottage industries would be the local crafts utilising local materials and accumulated know-how, which it would be the endeavour of the school to continuously upgrade. Work would be made intelligent and a source of knowledge by using the technique of correlation, where the problems faced become the focus for integration of knowledge of disciplines. This would make education problem-centred and life-centred, and knowledge of disciplines would become more meaningful and interesting. This was the philosophy and methodology which was to guide education from the moment of conception to the moment of death.

Gandhiji placed this concept of education, with which he had experimented for long, before the country for the education of elementary school children when the Congress Ministries came to power in 1937. Thereafter work on it continued either under government and private auspices or under private auspices alone. The experiment and its results won recognition from both national and international experts. In 1945, Gandhiji extended these principles to life-long education. As was his wont experimental work started on adult, pre-basic and post-basic education, under his direct guidance, in his life-time. Broad guidance for university education had also been given and work on it was started after his death by his close associates.

These ideas and experiments created an earthquake in the educational world and stimulated thought on educational problems. The Central Advisory Board of Education accepted basic education with certain modifications and it formed a part of its Report on Post-War Education Development in India and was accepted as Government policy in the First Five Year Plan. Some of its ideas—productive work, linkage with environment etc.—stimulated many other innovations during the period. The ideas of basic and post-basic education deeply influenced the approach of the University Education Commission to the idea of rural universities. Again Gandhiji's attempt to look at education as a whole, the coming of independence within sight, the general mass interest in education etc., stimulated the emergence of various plans for a national system of education. It has been rightly said that more thinking on education was done during this period than at any other time before or after.

The day to day working of the on-going system, however, was adversely affected by the general turbulent situation—the war, the Quit India Movement, the communal holocaust etc., resulting in administrative breakdown, general habits of defiance etc. The price rise had an adverse effect on teacher's discipline. Enrolment in primary education—the pace of expansion went down. Similarly in secondary education, its drift in regard to meeting the challenge of unemployment accelerated. Enrolment in universities no doubt increased but the problem of educated unemployed and unemployables also increased.

Valuable initiatives were, however, taken by popular governments, when they came to power, in connection with adult education and the education of the weaker sections.

But the development which forced itself forward against deep-rooted prejudices and vested interests of the rulers was the development of technical education which became one of the most important developments of the period under review. It was the settled policy of Britain to keep India an agricultural country and a market for her industrial goods after she had destroyed her industries and her technical capability. Some industries, however, they were forced to develop in their own interest and for their own survival. They kept these industries in their own hands and imported technical expertise from abroad, training only the lowest cadres in this country. Indian business talent forced itself forward, helped by the increasing strength of the national sentiment and the national movement. But such was the dearth of technical expertise that even Indian industrialists had to depend upon imported technicians. The Second World War, however, changed the whole situation. In the face of the threat of essential supplies being out off by the enemy regional self-sufficiency became a military necessity and a condition for survival. Apart from the War industries, their emergence gave a stimulus to industrialisation in general. In the post-war period, with the aim of being prepared for any future exigency and to justify their existence to an awakened world opinion and liberal opinion at home, as well as to satisfy the considerably strengthened business interests in the country, industrialisation figured prominently in the schemes of Post-War Development. The changed situation immediately revealed the great leeway that had to be made up to meet the shortages of technical personnel that would be experienced and hold up the programme of industrialisation. On the other hand the need for training youngmen in vocations and professions to make them employable made technical and vocational education a necessity to fight the growing unemployment among graduates and secondary school leavers—a highly explosive material and a danger to political stability. So the Abbott-Wood Report on Vocational Education was submitted as early as 1937. Proper consideration of the Report and action thereon was held up on account of the outbreak of the war but the threads were taken up immediately thereafter and the Sargeant Report (1944) not only absorbed the important recommendations of the Abbott-Wood Committee but presented a complete blue-print for technical education at all stages—a draft which was improved upon by subsequent committees and commissions but not radically altered. The All-India Council for Technical Education, set up in 1945 in pursuance of a recommendation of the Sargeant Report, would coordinate the development of technical education in the country and ensure the maintenance of standards. The Sarkar Committee (1946) laid down the lines of development for the four Indian Institutes of Technology where the top leaders required by industry and post-graduate education and research were to be trained. It is significant that India on the eve of Independence set up the Scientific Manpower Committee to assess our requirements of technical and scientific manpower over the next ten years and to recommend action to meet those requirements. The University Education Commission made interesting recommendations for future development. The Constitution made the Central Government responsible for the coordination and maintenance of standards in technical and scientific institutions. All these developments and insights were synthesised by the Planning Commission into a plan of action incorporated in the Report of the First Five Year Plan. The Planning Commission noted both the quantitative and qualitative aspects of technical education, formulated policies to meet our shortages as well as to set up an appropriate organisation for the development of technical education at the Central and State levels.

Another highlight of the period was the submission of the University Education Commission's Report. It was the Report of the first Commission on education to be appointed in independent India, headed by one of the greatest scholars of Indian culture. It was a thrilling document in which the past greatness of Indian culture and its modern reliance made Indians raise their heads with legitimate pride after being long depressed by the pronouncements of our rulers about the insignificance of our cultural heritage. It was, however, not to breed any spirit of complacency but to inspire us to pick up courage to meet the challenge of the present and the future with confidence in a spirit of global solidarity. Its second feature was to bring in science and technology in a comprehensive embrace with our culture to inject new vitality in our culture and to humanize science and technology by the life-giving touch of our humanistic culture. General education, through which it effects this life-giving and dynamic amalgam and gives us a good citizen and a good professional in one and the same person is one of the strong points of the Report. And all this is to be done within the context of our democratic Constitution with its emphasis on justice, equality, liberty and fraternity, within both the national and the international framework. The educational imperatives of these constitutional injunctions are worked out with clarity and insight. Another striking feature of the Report is its comprehensiveness. There is hardly any aspect of university education which it does not touch, and where, while drawing fully upon the wisdom provided by the earlier Commissions, it does not inject its own fresh insights.

Its major contribution, however, is in two directions: professional education and rural education. In professional education, with its emphasis on social responsibility, the most important recommendation is in regard to the organisation of engineering schools around specific industries which has far-reaching implications for increasing the efficiency of decentralised production, release of initiative on a widespread basis, spread of employment, removal of regional imbalances etc. An even more significant and radical departure is seen in the model of the Rural University presented by the Commission, where university education is looked at not in isolation but as the coping stone of an educational structure built from the bottom upwards, fitting tightly the social reality at every stage—the present reality and its future destination, visualised in the light of declared objectives and their most likely denouement in shaping India's national life.

There are, however, two overall limitations of the Report (which does not apply to the last Chapter of the Report in regard to Rural Universities), for which the Government and not the Commission was responsible. The Commission was prematurely appointed before the Constitutional Directives has been fully understood and translated into detailed policy decisions, before the masses had been energised to generate impulses from below for shaping the policies at the top. The second mistake was to begin with the university instead of basing it on the most appropriate system of primary and secondary education. The Commission did look at secondary education but from the university point of view instead of vice versa as it should be in a rational structuring of the educational pyramid.

As a result, the Commission was not able to suggest any radical overhaul of the system as the situation demanded and was able to suggest only reforms that would leave the existing structure largely intact. And as even the few bold reforms that it suggested were not implemented due to bureaucratic lack of initiative and imagination, the net effect of the Report, despite its brilliance in parts, was to give a respectability and a new lease of life to an outworn system.

Such developments that took place during this period in the field of education take one by surprise. For normally one does not associate educational or other constructive reforms with periods of such political upheavals and revolutionary change. What took place was largely due to the constructive genius of the Father of the Nation and the non-violent nature of our struggle where the very strength for that struggle was engendered through constructive activity. Other factors helped as, for example, the war to create the necessity for development of our technical manpower resources. The First Plan marked the end of this period, imbibing all its lessons, identifying the still remaining deficiencies, visualising future tasks and girding up its loins to take the next step towards national development with such wisdom as had emerged out of what had already happened. It was a decisive milestone in the continuous journey for development.

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